The Electragist

TRADE MARK REG. U.S. PAT. OFFICE

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Distribution Channels in Other Industries

By H. H. STINSON

A PECULIAR difficulty is encountered in discussing the subject of distribution and the channels through which manufactured products reach the ultimate consumer. Unlike most other business problems, those of distribution are almost wholly intangible and more or less arbitrarily created. Production and transportation can be conceived as machine-like processes and the remedy of evils in their working has the definiteness that attaches to repairing a machine. However, distribution is a series of human acts and therefore is subject to human vagaries and to the varying opinions, beliefs, prejudices and mistakes of the human beings who perform the distributing function.

The Association of Electragists, International, has taken very recently a firm stand on what it considers the most orderly and logical system of distributing electrical goods—that is, from manufacturer to jobber to retailer to consumer. By preaching this doctrine and by urging, not only its members, but all those concerned in getting electrical goods to the public, to observe this proper distribution system, it is hoped to do away with the following distribution malpractices, which were named in the report of the Merchandising Policy Committee:

1. That manufacturers and wholesalers are selling direct to consumers materials and equipment that require the functions of the contractor to install.

2. That manufacturers and wholesalers are selling direct to consumers material and equipment to be installed by the consumer where the consumer is not competent to make such installations.

WE have received so many requests from readers that we investigate other trades to learn how they treat certain practices which appear very burdensome to the electrical contractor-dealer that months ago Mr. Stinson started such an investigation. Already two articles have appeared covering (1) Advertised resale price and (2) Cost of doing business.

In the present article the problem of by-passing the wholesaler and the dealer is analyzed for several industries. The fourth article will appear in an early issue.

—The Editor.

3. That wholesalers are using their jobbing discount to perform a retail service on part of their sales.

The practice of the jobber of making retail sales is a matter of complaint in a good many industries, but in none of the others do the complainants base a part of their objection on the desire to promote public safety and thus the electrical contractor-dealer cannot be labelled selfish by the other parties to the controversy.

In no other industry is the disruption of the ordinary channels of distribution so fraught with danger to the consumer as in the electrical business. For that reason the distribution problems in other fields do not assume the importance that the same difficulties do in this field; yet each industry has its problems and a resume of conditions in several of the best known retail fields shows that the determining factor in the solution of these problems is an economic factor; that is, only those units of the distribution chain survive which have a mission to perform. Wherever changing conditions have eliminated the usefulness of any unit of the chain, that unit has speedily disappeared, or found new ways of rendering service, and this applies equally well to jobber, to independent retailer, to chain-store and to the house-to-house canvasser.

Hardware

In the household hardware store field, the jobber is and undoubtedly will continue to be a most important link in the chain of distribution. There are thousands of items in his catalogue and the manufacture of these products is divided between several hundred manufacturing firms. The average hardware retailer carries a very small stock of each item. Obviously it would be impossible for each manufacturer to maintain direct trade relations with even half of the retail hardware stores of the country—numbering, in round figures, about 25,000—and even if the retailer were to buy direct from the manufacturer, without being solicited for his business, it would be an unprofitable business for the manufacturer, due to the necessarily small individual orders. As the business is organized today, the manufacturer cannot afford to sell in less than carload lots.

There are various ways for the retailer to get around this difficulty and around his jobber, ways that include buying pools and chain store organizations. Buying pools are in existence today in the hardware field, but the practice is not widespread. It is recog-

nized by most retailers that in joining a buying pool they are merely performing the jobbing function themselves and that in taking over the wholesaler's job they have lost a good many advantages, such as having someone to carry them over a business soft spot occasionally and someone to supply them within a day or two with items they could not obtain through a pool under a week or more.

There are several chain store organizations with from seven to thirteen stores apiece, but here again the idea of eliminating the jobber has made slow progress and the amount of business that is switched past the jobber by these organizations is negligible.

Tires

A few years ago it seemed that the wholesaler of automobile, motorcycle and bicycle tires and tire accessories was lost in the shuffle of changing circumstances. The tire market was dominated by the very large tire manufacturers and these manufacturers began to establish warehouses and branch offices in almost every important center of the country. Lately the outlook for the tire jobber has become brighter. Smaller manufacturers have entered the field and cannot afford, as the larger companies can, to perform their own assembling and warehousing functions; in addition to this change, some of the large manufacturers have discontinued a number of their branch offices and warehouses. This change is more noticeable in the South, the West and the Southwest, these territories being farthest from the centers of tire production. Nevertheless, it is estimated, eighty percent of the tires manufactured in this country are still sold direct from manufacturer to retailer.

This custom has resulted in many exclusive or semi-exclusive agencies, retailers who handle only one make or at most two makes of tires and tubes. This, seemingly, would tend to reduce friction between the various links of the chain, but even here we find problems. One of the most important of these and one that is developing considerable ill-feeling between manufacturer and retailer is the custom of commercial discounts. In theory these commercial discounts are given only to operators of large fleets of commercial vehicles, but in practice, according to many dealers, a man owning only two or three cars is able to obtain the discount. Here again we have the human element in the distribution puzzle and both dealers and producers are endeavoring to find a reasonable and common basis of settling the question.

Jewelry

There has been some dissatisfaction with the jobber method of distribution in the jewelry field, but this was on the part of the manufacturer rather than the retailer. Many manufacturers, whose volume was small, were accustomed to make arrangements with one jobber to handle their entire output and thus the jobber was placed in a position where he could dictate to the producer. For that reason, according to one authority in the field, there are fewer jewelry wholesalers now than there used to be. The wholesaler in this field, however, is far from being on the way out, for there are still a great many manufacturers who confine their activities to manufacturing and stay away from the selling end of the business and the industry is divided into two camps on the subject, one side maintaining a rigid sales-to-jobber-only policy, the other accepting orders no matter where they come from.

The retail jeweler finds it easier, perhaps, to buy direct from the manufacturer than do retailers in other fields, due to the comparatively small—though highly expensive—stock he needs and to his very slow turnover. If he runs out of one item he need be in no great hurry to replace it and his orders upon the manufacturer are generally of such an amount as to make the transaction profitable to the manufacturer.

An interesting sidelight upon the jewelry field is the recent increase in the installment plan business. There have been four or five firms who have done nothing but installment-plan business, but it has been conducted heretofore on a catalogue-money order basis. Now a number of high-class retail firms are getting into the business and running it from their stores.

Shoes

The shoe field has gone through a remarkable revolution in methods of distribution. The old time jobber who carried everything from the smallest infants' shoes to old ladies' comfort shoes, with riding boots and shoe polish on the side, has had to concentrate. Those who could not have been eliminated. It has been a case of fast distribution, warranting quick selection of styles.

This about-face in shoe distribution has been due to the policy of manufacturers who will accept orders that are virtually retail selections, as low as six pairs being taken. There is now, however, a tendency for manufacturers to insist on larger orders, for the merchant's own safety. So many stores have 100 small lots where they ought to have a half a dozen big lots. This movement has not been a concerted one on the part of the manufacturer, but the trade is coming more and more to the belief that it is better for them to concentrate on a good pattern that has intrinsic value and good taste and diversify it by diversifying the leather in the shoe.

Strange as it may seem, there has been some house-to-house selling in the shoe business, but the question of service, i. e., of fitting, presented great difficulties and an irresponsible element had entered the field to such an extent before this problem was solved that the whole bell-ringing system was soon eliminated.

Mail order houses that are well established and have high standards of distribution, are doing a good business, despite the fact that returns to them from dissatisfied customers through error in size or disapproval of the pattern after it actually gets on their foot has been greater than ever before. But a good many mail order houses have withdrawn from the shoe field, once again proving that it is not alone the saving any method of distribution can make but the service it can render that keeps it in existence.

Groceries

In the grocery trade with its thousands of different products, there is a very important assembling function to be performed and the wholesale grocer undoubtedly dominates and will continue to dominate in this field, despite buying pools and chain stores. Some manufacturers, such as the National Biscuit Company and the Heinz Company, deal direct with their retailers, but they are merely doing the wholesaler's job. In every case, they have local warehouses, salesmen and distributing facilities and are wholesalers in every sense of the word, except that of ownership.

Where chain grocery store competition has been strongly felt, many retailers have entered cooperative buying pools and have obtained wholesale discounts from manufacturer, but the extent to which chain stores have entered

the field is probably not as large as generally thought. In fact, according to the Census of 1920 $15,500,000,000 worth of foodstuffs are sold yearly, while the total business of all chain stores—this including drugs, groceries, hardware, clothing and all other commodities—amounts to less than $3,000,000,000, of which foodstuffs would form a comparatively small proportion.

Portland Cement

In the ten or fifteen years following 1900 Portland cement manufacturing plants were built in nearly every section of the country and since cement has always been sold f. o. b. mill to the retailer the trade territory of each mill was confined to that section where it could undersell rivals on account of enjoying lower freight rates. This intense competition and the fact that the product was one of simple and highly standardized units has eliminated the building supply jobber from the cement field entirely. He had no economic function to perform and therefore has lost the business.

Drugs

In the drug trade there is a rather rigid adherence to the customary channels of distribution. Manufacturer sells only to wholesaler and wholesaler only to retailer. There is an almost infinitesimal amount of business done between manufacturer and physician and hospital and between manufacturer and retailer. In each case, however, the function of wholesaling must be performed, such things must be done as storing of excess supplies, extension of credit, assembling and storing of the goods and their delivery.

In the wholesale drug stock there is a range of from 45,000 to 60,000 separate items. It is obvious that with a business of such detail no retail druggist can afford to carry a very large quantity of any one commodity but must have access to fresh supplies quickly and in the course of the year will turn his stock over two or three times.

Thus the wholesale druggist is rendering a great service to the retailer by assembling a tremendous stock from which he can order when and in what quantities he wishes. And, from the manufacturers' standpoint, it seems that the market can be most economically served by dealing with a few hundred wholesale druggists instead of with from 45,000 to 50,000 individual retail drug stores.

Though the chain drug stores have secured a firm foothold in the large cities, the independent retail druggist still does almost 90 percent of the total drug business of the country and as long as that proportion continues to be true of the drug trade, the wholesale druggist will remain in an almost impregnable position.

From the foregoing resume it will be seen that the retailer is absolutely secure in his position. No upheaval of distribution conditions can put him out of the picture for he is rendering a vital service. In some lines the jobber is slipping, in others he is holding his own; and he is most strongly entrenched where he performs a really important duty of assembling a great number of small items, as he does in the electrical business, as well as the drug, grocery and hardware fields. In other lines where the variety of commodities is small and where the retailer can do his own assembling on that account, the wholesaler is finding it hard sledding.

It is the working of an economic law and economic laws cannot be repealed.

Telephone Companies Ask Cooperation

Before installing conduit in a building for the telephone system, contractors are asked by the telephone people to get in touch with the local telephone company, so that the layout may be approved.

There have been frequent cases of late where such approval would have saved the contractor considerable time and money on work that had to be torn out.

To enlighten the contractor on the subject, THE ELECTRAGIST talked the matter over with E. S. Worden, District Chief Engineer for Manhattan and Bronx, New York City.

His remarks are applicable to the contractor in any section of the country.

Mr. Worden said, "Before contractors provide conduits, etc., for telephone systems to be installed later by the local telephone company, they should consult the Plant Engineering Department each company maintains in the larger cities and get its approval of the layout, thus frequently saving themselves, the builder and the telephone company considerable trouble."

"The New York Telephone Company will not install conduit," he continued, "and I believe this is true with similar companies: Neither will we countersink terminal boxes, as this would give us a lien on the building. If the builder wants such work done he must do it himself. In short the telephone companies will only install such material as they can remove and salvage if the building is torn down.

"An apartment house obviously needs a larger sized conduit than a loft building yet it sometimes happens that a contractor goes ahead with the work without consulting us and when we are called in at the last minute, we find we are expected to pull an inch cable through a half inch conduit. Also we are sometimes expected to pull cable around several corners. This would be possible with wire but not cable.

"The telephone system in a building is just as important as the plumbing but some contractors do not seem to think so, consequently when these difficulties arise they cause friction between the contractor and owner.

"The telephone companies only ask that the contractor co-operate with them and get together over the layout before the work is started. The plant engineering departments are maintained for the free use of the contractor and architect and they should both use them for their own advantage as well as ours."

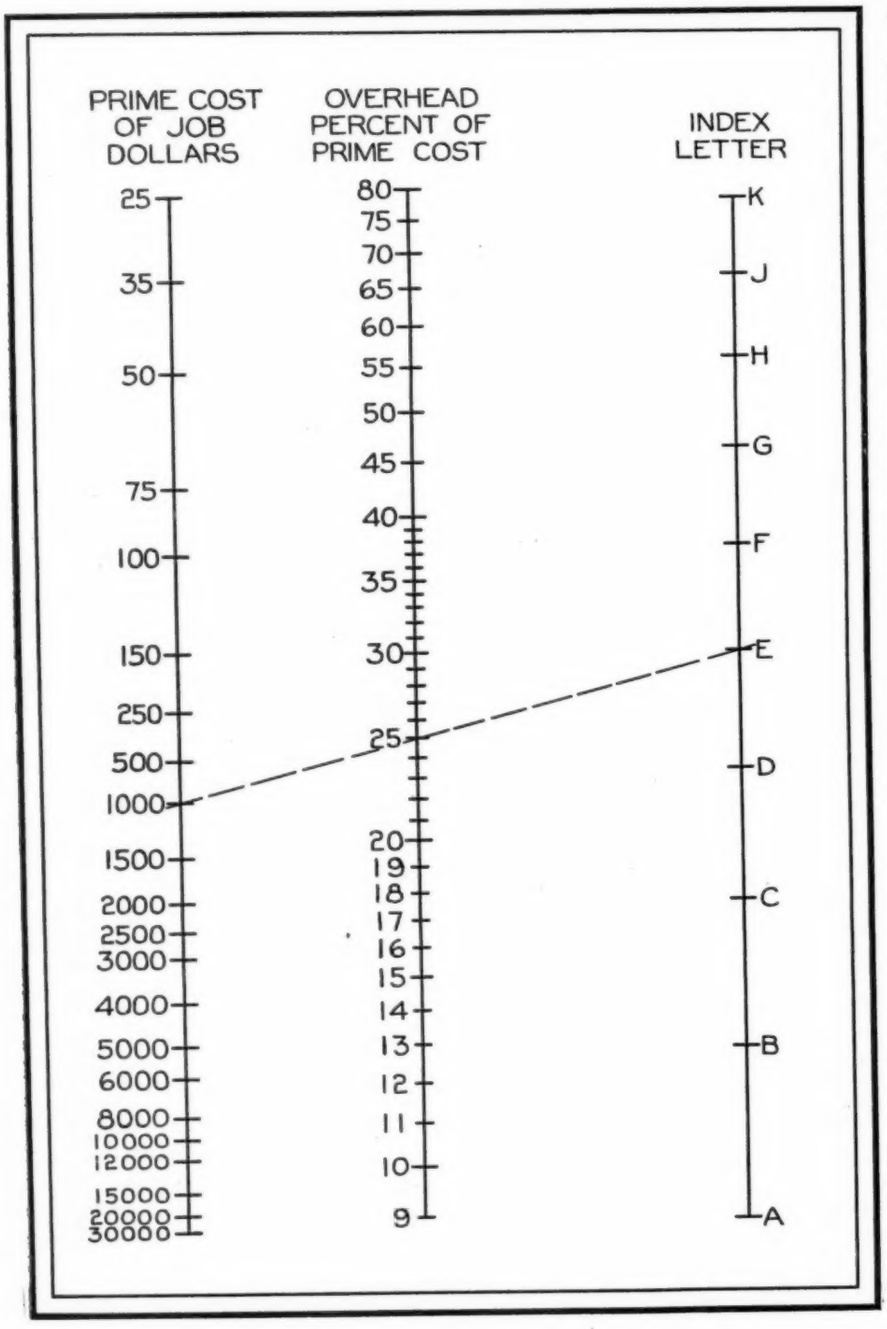
Wiring State Buildings

A bill has recently been passed by the State legislature of New York making it necessary for all departments of the state government to let separate contracts for electrical work in state buildings, rather than include such work as part of the general contract.

This is a movement that the N. Y. State Association of Electrical Contractors and Dealers has long been in favor of, and much credit for its passing should go to chairman Miller for his constructive efforts.

A Scale for Computing Individual Job Overhead

Herein is presented what the contractor has long wanted. A practical method for arriving at the approximately correct percentage for overhead to be added when figuring the selling price of jobs



THE contractor's overhead is the underlying cost of conducting his business over a long period. He must so divide that cost of doing business and apply a part of it to each job done, that at the end of the period the total overhead will have been returned to him—and something more which will be his profit.

It is impossible to get the same percentage of overhead and profit on all sizes of jobs done under all kinds of conditions. The contractor's problem, therefore, is one of so graduating the percentages applied to all of his jobs that the lower percentages forced by competition as his limit on larger jobs are balanced by larger percentages applied to smaller jobs, to result in his receiving at the end of the year an average that will cover his own particular business overhead.

No other plan that he can adopt will give him success that does not produce this result—the balancing of his total business overhead with something over for a profit. Furthermore, if he is operating his business as efficiently as he can under the conditions of service to his customers which he faces, then his plan for selling his jobs must cover his own cost of doing business, regardless of some other cost under other conditions.

The plan, or scale, which he adopts for apportioning his overhead to his various jobs must meet two essential tests. First it must return his total overhead when applied to all of his jobs. Second, it must meet the normal competition which he faces on the various sizes and classes of work which he is efficiently set up in business to do.

The amount expended as overhead by a certain contractor to handle a given job of electrical construction work may be called the normal over-

head for that job and that contracting organization. For a job of a similar kind but twice the size the overhead will not be twice as great, but will be somewhat less, that is, the overhead in percentage of the cost will be somewhat less for the larger job.

As the size of a contracting organization increases, it is possible to effect many economies in the office work. Time saving office appliances can be used, low priced employees can be utilized to do routine work, and the higher priced employees can be kept busy at highly productive work. Savings can be made in practically all items of expense. The result is that a large organization can and usually does operate more efficiently than the small one. As a rule, therefore, the large organization can handle a given job with less expense than the smaller one.

Overhead Variations

The average overhead percentage on the annual volume, is as a rule, less for a large contractor than for a small one. This is due to two causes. First, the larger volume of business is made up chiefly of large jobs on which the overhead percentage is smaller than on the bulk of the small contractors business. Second, the large contractor is able to operate more efficiently, as explained in the preceeding paragraph.

Another fact which must not be lost sight of is the variation in overhead between different organizations doing businesses of the same size and same general character. If we assume a certain average overhead as normal for a business of a certain size and character, some contractor, through superior methods of management, may be able to operate below this normal figure. Others, by reason of careless or short-sighted methods, may allow their expense to exceed the normal.

It will be seen therefore that the cost of handling a given job, that is, the overhead on that job, will for any given organization depend upon three factors:

1. The size of the job.
2. Annual volume of business done.
3. The operating efficiency of the organization i. e., whether this is normal for the volume of business done, or is above or below normal.

A careful study has recently been made by the staff of the Association of Electragists, International, in an effort to develop a simple and practical method of apportioning the proper overhead to each job. The accompanying scale is presented as the result of this study. This scale is based upon the best data available in the Association files at the present time, and it is confidently believed that the overhead percentages shown by the scale will be found closely comparable with the actual facts, though as in the case of all new developments of this nature, further investigation may indicate changes which will give a closer approximation.

TOTAL ANNUAL SALES							
$25,000	$40,000	$60,000	$100,000	$150,000	$200,000	$300,000	Index Letter
Average Overhead Percentage of Prime Cost							
					14	14	A
			18	17	17	16	B
	24	22	21	20	19	18	C
28	26	25	23	22	21	21	D
31	29	28	26	25	24	23	E
34	32	31	28	27	26	25	F
37	35	33	31	30	29	28	G
41	38	36	34	32	31	30	H
44	41	39	36	34	33	32	J
47	44	42	39	37	36		K

It must be noted that the percentages of overhead used in the accompanying table and scale are percentages of overhead to prime cost of all sales, and not percentages of gross business. Therefore, the contractor must divide his total overhead expense by the total prime cost of all his jobs in that period to determine his percentage in this ratio.

The scale takes into account the three factors mentioned above. It is used as follows:

Find in the table the index letter corresponding to your annual volume of business (Total Annual Sales) and your average overhead expressed as a percentage of prime cost. Lay a straight-edge across the scale from the point marked with your index letter to the point corresponding to the total prime cost of the particular job. The intersection of the straight-edge with the middle line shows the overhead which should be apportioned to this job as a percentage of the prime cost.

To this must then be added, of course, the percentage of profit desired on the job. This scale does not include any allowance for profit.

Example:—Your annual volume of business is $60,000 and your average overhead is 28 percent of total prime cost. The prime cost of a certain job is estimated at $1,000. Referring to the table, the index letter is found to be E. A straight-edge placed across the scale as indicated by the broken line intersects the middle line at 25 which is the percentage to be applied to the prime cost of $1,000 to find the amount of overhead chargeable to this job.

In the same manner, for a job having a prime cost of $10,000 handled by a firm whose annual volume of business is $150,000 and whose average overhead is 22 percent, the index letter is D, and the overhead on this job is found to be slightly under 15 percent.

Acceptance Means Agreement

A small contractor bid on a wiring job which ran into several thousand dollars and was awarded the contract. His capital was limited, but he figured he would just about be able to swing it comfortably. During the process of installation he was called upon to make several additions to his original plans, the unwritten understanding being that the additions would be charged for over and above his bid. When the job was finished, he submitted his bill for the original contract and the extras, but it was returned with a check for the amount of the original bid only and a letter saying that no more would be paid and that the check would be considered payment of the bill in full. The contractor needed money, for the job had gone longer than he expected and several creditors were pressing him. He cashed the check but was very careful to write his debtor that the check was insufficient to cover the bill and that he would sue for the remainder. However a lawyer told him he had no chance in a court of law, it having been decided in a Colorado court that:

"Where the amount due is in dispute and a check less than that claimed is sent to the creditor with a statement that it is sent in full satisfaction of the claim, and the tender is accompanied by such acts or declarations as amount to a condition that if the check is accepted at all, it is accepted in full payment of the disputed claim and the creditor so understands it, its acceptance by the creditor constitutes an accord and satisfaction, even though the creditor states at the time that the amount tendered is not accepted in full satisfaction."—Civ. Code, Par. 1521-23.—Berger v. Lane, 213, p. 45.

Local Code Practice Wasteful*

By W. J. CANADA
Electrical Field Secretary, National Fire Protective Association

AMERICAN living standards are rising with the rise in widespread acceptance and application of American standards of practice. Although inventions play a large part in raising living standards—the steady and less spectacular elimination of economic wastes play an even larger part. One large source of waste is in too great diversification of sizes and qualities of material to meet whims and reasonless custom. The Department of Commerce, through its Simplification Division and Bureau of Standards, and the American Engineering Standards Committee through its procedure and its sectional committees, are attacking these two sources of waste with zeal and relative success. A similar source of waste in time, effort, misconception and dissension, is in the too great diversification of local rules for construction practice where these do not adhere to national standards. With infant national standards this may be regretable, but it is natural. With seasoned national standards the constant local tendency to vary should be less and more easily limited. One such seasoned standard of 30 years standing is the National Electrical Code.

THIS is the first public statement made by the new electrical field secretary since he took up his duties on May 1. Mr. Canada's work which is being done under the auspices of the N. F. P. A. has the support of all the national electrical organizations. Its purpose is the furtherance of the use of the National Electrical Code locally and through contact and study to develop a greater uniformity of interpretation and administration of the Code. His first statement, here presented, show how great is the need from an economic standpoint for such activity.

—The Editor.

National Electrical Code

When the National Electrical Code first became a standard, few agencies were actively interesting themselves in national construction standards, even the Federal Government was confining its standardizing activities to monetary, weight and measure matters. But today, we have scores of active standardizing agencies, among which are government as well as association agencies. Thirty years ago local activities in cities and states were not so closely interrelated as today, and their variations in practice affected each other but little. Today local communities rub shoulders more and more closely and local business methods and local construction methods are therefore closely interdependent and need correlation. And this correlation is commonly best attained through unifying practice to a greater and greater extent by using national standards. Elimination of wastes as the guiding principle of these standards has become so well accepted that there is often written into their texts: "the purpose of this national standard is for general application to current practice, in order to insure safety, economy, convenience and cooperation."

The mere production of standards will not accomplish the full measure of protection against waste. Standards, like other products, must be marketed and more than other products, are unsuccessful unless generally marketed. Competition is not defensible. It is wasteful of time and effort for different local committees to be working out local electrical installation rules varying from the national standard and from each other. It is wasteful for local administrators to give their time, useful for their administrative functions, to the preparation of local rules when a suitable national code will allow as much variability in practice to meet important variations in local conditions, as is expedient and economical. Higher local taxes result from doing things separately which are better done cooperatively. The code making business is inherently a cooperative one—not a competitive one. It is a national—not a local business.

But waste in code production by "doing it locally," serious 'though it be, might continue to be endured, like other non-productive taxes, were it not for far greater wastes inflicted more directly on the public and on electrical industry by the application of these many diverse electrical codes in the different administrative jurisdictions. Not only do too many rules make cooks cost more, but they spoil the broth.

Manufacturers need larger investments to build larger plants to turn out greater variety of similar devices to meet mere styles rather than demonstrated needs. Jobbers, except where hand to mouth transactions temporarily prevail, must stock and ship this greater variety.

Inspection agencies must exert greater effort to sustain these wasteful variations in the face of these greater costs and delays. Standardizing laboratories must standardize more variations than the importance of the causes for these variations will at all warrant, and their standardization of these varying species, in turn is quoted as justifying the variation. For electragists, the basis for estimating and conducting installation work is insecure—the work must carry insecurity costs.

The Public

Each of these additional costs is borne by the unsuspecting public that purchases wiring and devices. The public gets less for its money—less complete installation, less abundance of appliances, less material convenience and prosperity. All—to satisfy some one's desire to "do it differently," or to promote the interest—often over-emphasized interest—of a minority of manufacturers, jobbers, inspectors, electragists or others. And let us not forget that because of local variability, there is confusion, and some cities and much open country that observe no rules. Thus, while Nero fiddles, Rome burns.

Our living standard is today inseparately bound up with our electrical standards. Wastes in variable requirements, which were formerly, excusably, passed over when electrical applications

*Delivered before annual meeting N. F. P. A., Chicago, May, 1925.

were relatively small, cannot properly be passed over today, when we are investing a billion dollars a year of our hard earned savings in electrical installations. To the contrary, we can afford large efforts toward eliminating wastefulness in making these investments—by getting uniform practice.

We may, and collectively we do, have faith in a national code so seasoned and so representative of all judgment and experience as is the National Electrical Code, but "faith without works is dead," and we now are aiming to reinforce and correlate the thousand of local efforts, to really promote this code, everywhere—city and country —"to show our faith by our works." Each individual is willing to surrender a little local prestige to accomplish this end—or rather realizes he will acquire a new and better prestige in so doing. Local cooperative bodies are ready to initiate, encourage and support this simplification of electrical practice.

What is Lacking

In fact, it has been getting more and more apparent for some years that all that is lacking in our standardization machinery is that we must vitalize our existing but academic abhorrence of needless variations. Our centralized codifying bodies have been strong and wise and "united, they stand." But we have not correlated to the same state of efficiency the strength and wisdom of the field where codes are applied and administered—so, "divided," we have sometimes "fallen." No nationwide exchange machinery for field experience, problems and suggested solutions has heretofore been evolved, which can function continuously and consistently.

It has become widely recognized, however, that personal sacrifice, sustained purpose and a lively sense of humor are necessary locally, with which to combat violent advocacy of local pride and exaggerations of local color. Besides avoiding new variations as far as practicable, which is no mean task in itself, there is the inertia of old variations to be overcome. Sometimes an existing diversity has been suggested by Tom for Dick's obvious advantage, while Harry has become the public proponent of the variation. By such processes, strongly intrenched local minorities overcome the unorganized local majorities and even impose their will on the widely scattered general public. Shall Tom or Dick or Harry suggest relinquishing such a diversity? A local cooperative body might do what neither Tom nor Dick nor Harry would suggest and still secure acquiescence from all three. An available field secretary might add helpful support to some such local movements, through familiarity with similar cooperative readjustments which have proven successful elsewhere.

The "field" of the electrical field secretary is the great group of state, city and other jurisdictions, where electrical standards are daily applied and are closely interacting upon each other by reason of our interlocking civilization. The "forces" for elimination of waste already exist or are forming in the person of local cooperative bodies. One such type of local cooperative body is the local electrical code committee now coming into being in scores of cities throughout the country. The number of all such local cooperative bodies and their effectiveness will naturally increase. The possibility that they could degenerate into instruments for, instead of against, wasteful diversity in practice is unthinkable. Their function is avowedly to direct the critical eye of truth on deceptive local enthusiasms.

Value of Field Secretary

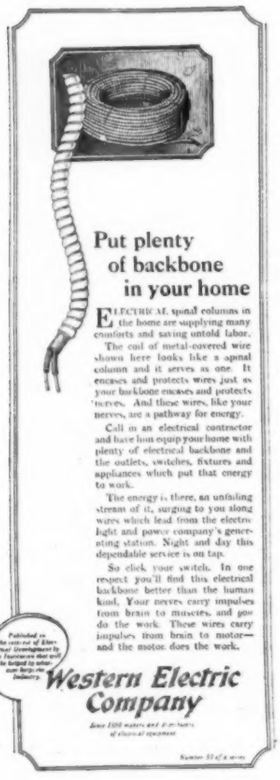
The electrical field secretary, by observing the nature of the code problems of these local bodies, and their findings, can make his advisory services more and more valuable, as later local problems of a repetitive character arise elsewhere—and most problems are repetitions. From all this contact with actual field problems will come to the field secretary some fair and reliable estimate of the relative validity of each proposed or existing variation of a local field practice from the current national standard. Where the validity ranks high (and this will occur), the field secretary can aid in securing early consideration by other competent and disinterested persons, and where warranted—incorporation by orderly procedure into the national code. Few variations are worthy of sudden and disorderly incorporation. On the other hand, sporadic and overemphasized variations can be appraised as such and national standards can remain unaffected while the communities affected can be aided to an orderly reconsideration. Variations, to demonstrate any justification, need real proof, either in experienced and demonstrated hazards or in serious loss of economy, not cared for by the national standard.

All of these matters should be considered, both locally and nationally, from the standpoint of securing the greatest good, for the greatest number for the greatest period of time. Orderly consideration prevents personal predelections, vigorously presented, from governing in so vital a matter.

What a "Time and Material Basis" Includes

An electrical contractor took a factory wiring job on a time and material plus ten per cent basis. His bill when he submitted it, included a charge for overhead, which was disallowed by the factory owner. A referee decided that the contractor was not correct in charging overhead to the job under the terms of his contract, inasmuch as a Pennsylvania court had ruled that:

"Under a contract to remodel certain buildings on a 'time and material basis with 10 percent profit as compensation for the contractor,' the words time and material basis' include the necessary cost of operation, the cost of labor and materials going into and becoming part of the finished product, the wages and salaries of the men engaged in the particular work contracted for. and the actual cost of the materials furnished, but do not include any portion of 'overhead,' as the contract provision for 10 percent profit was intended to take care of a proportionate share of the contractor's 'overhead,' which term includes salaries of executive or administrative officials, interest charges for floating bonds, carrying charges, depreciation, taxes and general office expenses, being all executive or administrative costs incident to the management or supervision of conduct of the capital outlay, or business, as distinguished from 'operating charges' or those items which are inseparably connected with the productive end and may be seen as the work progresses and are the subject of knowledge from observation."—Lytle, Campbell & Company v. Sommers, Fitler & Todd Company, 120 A. 409.


Put plenty of backbone in your home
ELECTRICAL spinal columns in the home are supplying many comforts and saving untold labor.
The coil of metal-covered wire shown here looks like a spinal column and it serves as one. It encases and protects wires just as your backbone encases and protects nerves. And these wires, like your nerves, are a pathway for energy.
Call in an electrical contractor and have him equip your home with plenty of electrical backbone and the outlets, switches, fixtures and appliances which put that energy to work.
The energy is there, an unfailing stream of it, surging to you along wires which lead from the electric light and power company's generating station. Night and day this dependable service is on tap.
So click your switch. In one respect you'll find this electrical backbone better than the human kind. Your nerves carry impulses from brain to muscles, and you do the work. These wires carry impulses from brain to motor—and the motor does the work.
Western Electric Company

When you buy a home—ask about the wiring!
When you go through a house from top to cellar—with a view to buying—notice whether the outlets and lights are thoughtfully placed. Look for the G-E mark on the wall-switches. And ask about the wiring.
A builder offers a very convincing proof of the quality of his building when he says, "You see this house is equipped with a G-E wiring system throughout." Everyone knows that General Electric makes great turbines for battleships—generators for power houses—electric locomotives that pull heavy trains over the mountains. And with a G-E wiring system in your walls, you have the same electrical precision and the same assurance of quality.
Using G-E wiring materials may mean a slight additional cost—less than one-tenth of one per cent of the cost of the house. But it means a great ultimate saving. Be sure to talk about the wiring.
WIRING SYSTEM
—for lifetime service
GENERAL ELECTRIC

S3
One way to spell "Home, Sweet Home"
For solid comfort there's no place like home—when your home is built with plenty of signs like these in the blueprints.
They are the symbols which your electrical contractor uses for the outlets through which electricity will serve you. The more liberally your wiring plans are sprinkled with them, the more thoroughly can you enjoy the comforts of electricity.
Not only for light but for power too, and not only for houses still in the plan stage but for existing houses too—the contractor is ready to make available for your most convenient use the many time-saving and labor-saving electrical devices which help make a house a home.
The power is there. Your lighting company sees to that, furnishing an instantaneous delivery service night and day. Don't be content with only half the electric energy possible. Put it up to the contractor to harness it all to your bidding, in your "Home, Sweet Home."
Be it ever so humble, the cottage can now be the equal of the palace, electrically at least—and an adequate wiring job does the trick. Talk it over with your contractor.
Western Electric Company

Another Force Working to Build a Demand for Quality House Wiring

THERE are now beginning to appear in national magazines and in the newspapers advertisements by electrical manufacturers on the subject of house wiring. True, these manufacturers are trying to build the demand for their products, but first of all, they are creating in the minds of the American people a desire for better electrical installations.

To the electrical contractor this is important because it is helping him to sell, what he has always wanted to sell, quality installations.

First there was the electrical contractor working alone to do this job. Then came the Electrical Home bringing thousands into contact with the comforts and conveniences of proper wiring. The local leagues got behind the movement and wherever possible worked with builders and owners to induce them to increase the number of outlets.

Last Fall the Lighting Educational Contest further increased the public desire for better installations and now the Red Seal Campaign is starting in a growing number of cities.

All of this has been local effort, and now as a national tie-in, the manufacturers are beginning to arouse the public demand for quality work. A few typical advertisements which have appeared recently are shown at the top of this page to give an idea of the constructive work that is being done.

As the result of price cutting and the eagerness with which the public accepted lower bids the average electrical contractor has about come to feel that quality house wiring cannot be sold. In far too many cities he is aided and abetted in this idea by the central station, which, in its short-sighted way, believes that the cheaper the cost of wiring the more customers it will get.

The more thoughtful contractors and others have felt that the reason the public shopped around for the lowest price was because the cost of quality wiring as they imagined it, was out of sight, and so the public had never taken the trouble to learn anything about it.

Results of the last few years have proven this line of reasoning to be right. Wherever the public has been taught what lay behind the switch, a better and more complete job was demanded.

The plumbing industry found out that the public wanted better plumbing in spite of minimum sanitary laws. The copper interests are arousing a public demand for copper gutters, screens, etc. Other industries have done likewise but they have done it only by teaching the public what good installations would do.

The electrical industry is now on the road to better installations, more complete jobs. For the electrical contractor this should be good news because the better class of jobs, besides bringing a better price and more profit, are better advertisements. They mean more satisfied customers.

Estimating for Electrical Contractors

Lesson No. 6—Completing the Estimate

By ARTHUR L. ABBOTT
Technical Director, Association of Electragists

This is the sixth lesson in Mr. Abbott's Course in Estimating. The course started in the January issue and the first four articles concerned, respectively, the method of laying out a job preparatory to taking off quantities, the systematic method of taking off quantities, labor on branch circuit conduit work, labor on large pipe, wire, panelboards and cabinets, and supervision, non-productive labor and job expense.

This lesson concludes estimating of large work. Next month Mr. Abbott will start on estimating house wiring.—The Editor.

ALL material having been listed on the Pricing Sheets and the material costs and labor hours having been computed we are now ready to complete the estimate. The totals from all Pricing Sheets must be consolidated, the total cost must be found, and the bid price must be arrived at. The Recapitulation Sheet (Form 5) shown here, is a convenient form to use for this purpose.

All totals on the Pricing Sheets (Lesson No. 2) are first to be transferred to the Recapitulation Sheet, and the labor hours added to get the total. The labor hours must then be multiplied by the average wage rate per hour to find the cost of the labor in dollars and cents.

The estimator has by this time become thoroughly familiar with all details of the job, and having the complete list of material and total hours of labor before him, can very readily determine the approximate average crew which will be required to do the work. The calculation of the average wage rate is shown at the bottom of the Recapitulation Sheet.

There are on every job some items of material and labor which are in themselves too small to list, but which do cost something and taken altogether amount to quite a sum. The Recapitulation Sheet therefore provides a space for entering an allowance for miscellaneous material and labor. The amount to be allowed here will depend upon the extent to which the small details have previously been covered in the Pricing Sheets.

The non-productive labor items should be shown in the space provided for them and the total entered in the labor column. The total cost of material and labor is then found. To this should be added the job expense, the various items entering into this cost having been carefully determined. The total cost of material, productive labor, non-productive labor, and job expense is the *prime cost* of the job.

To the prime cost, overhead must be added in order to find the total cost, then whatever is added over and above the total cost is profit, the final total being the amount of the bid, or selling price.

The problem of overhead is deserving of much more attention than is commonly given to it by the electrical contractor, especially with reference to the amount which should be included in the estimate. It is of course well understood that the contractor's accounting system must furnish a record of his total cost of doing business. This is the fundamental figure which is the starting point for the study of overhead, but it by no means tells the whole story.

In the first place, if the contractor carries on a retail merchandising business in addition to contracting, the total overhead must first be properly apportioned to the two departments. This is very necessary, because it is a well established fact that there is a considerable difference between the overhead costs for these two classes of business. [The details of the method of allocating the total overhead expense to the two departments of a business will be discussed in the columns of THE ELECTRAGIST in the near future. Editor].

After the cost of carrying on the contracting part of the business has been determined, the next consideration is the method of arriving at the amount which is properly chargeable to each job that is estimated.

There are three methods now in use for applying

RECAPITULATION

Job Grand Hotel — Estimate No. 1024 — Sheet No. 12 of 12 sheets

Estimated by A.B.C. — Checked by D.E.F. — Approved by G.H.I. — Date 4-9-25

Sheet No.	System	Material	Labor	Total
			Hours	
7	Branch Circuit Pipe & Boxes		221495	
7	Large Pipe	8186444	131103	
8	Wire - Swbd. - Cabs. & Panels	1946850	79424	
9	Switches & Receptacles	155285	18340	
10	Phone - Branch Pipe & Boxes		43867	
10	" - Large Pipe	444348	10755	
11	" - Cabinets	25070	6178	
	Total Hours		3931252	
	at 99½ c.		3836775	
	Non-productive labor		131100	
	Handling material	5066	5000	
	Light Tins			8525 12
	Miscellaneous			58400
	Totals	4707377	3817775	
	Traveling time			
	Total			9109 12
	Job Expense			
	25 % Overhead			2277 28
	Total net cost			11386 40
	10 % Profit			1138 60
	Selling price			12525 00

Bond	15000
Pro rata charges	
Insurance Compensation	9400
Watchman	18000
Telephone	
Drayage	
Inspection	5000
License	
Storage	
Freight, express and cartage	14000
R. R. fare and meals—	
Round trips at	
Board Men Weeks at	
Total	58400

Average Crew - 1 man at 1.20 per Hr.
1 " " 1.00 " "
1 " " .75 " "
1 " " .75 " "
3.70

Average rate per hour = 3.70/4 = 92½ c.

Percentage of Net Profit Desired	Overhead Percentages (Cost of Operating Business Divided by Gross Sales)																				
	15%	16%	17%	18%	19%	20%	21%	22%	23%	24%	25%	26%	27%	28%	29%	30%	31%	32%	33%	34%	35%
2½%	21	23	24	26	27	29	31	33	34	36	38	40	42	44	46	48	50	53	55	58	60
5 %	25	27	28	30	32	33	35	37	39	41	43	45	47	49	52	54	56	59	61	64	67
7½%	29	31	33	34	36	38	40	42	44	46	48	50	53	55	58	60	63	65	68	71	74
10 %	33	35	37	39	41	43	45	47	49	52	54	56	59	61	64	67	70	72	76	79	82
12½%	38	40	42	44	46	48	50	53	55	58	60	63	65	68	71	74	77	80	84	87	90
15 %	43	45	47	49	52	54	56	59	61	64	67	70	72	76	79	82	85	89	92	96	100
17½%	48	50	53	55	58	60	63	65	68	71	74	77	80	84	87	90	94	98	102	106	
20 %	54	56	59	61	64	67	70	72	76	79	82	85	89	92	96	100	104	108			
	Percentage of Mark-Up to Add to Cost of Labor and Materials																				

overhead, based on (1) Selling price (2) Prime cost (3) Labor.

Case I—*Overhead a Percentage of Selling Price.*—The total overhead cost is divided by the total volume of business and the resulting percentage is the overhead percentage on selling price. Profit is likewise considered as a percentage of the selling price. These percentages cannot be added to the prime cost as found above, because they are based on selling price. Because of the complicated process necessary to obtain the proper markup percentage the Association of Electragists has prepared the accompanying table.

In using this table, the estimator first decides what percentage overhead and net profit the job is to carry, and then finds in the table the proper percentage to mark up the cost. For example, it is desired to allow 18 percent for overhead and 10 percent for profit, both being figured on the selling price. The table shows that 39 percent must then be added to the prime cost.

Case II—*Overhead a Percentage of Prime Cost.*—It is the more common practice among electrical contractors to add to the estimated prime cost a percentage of this cost for overhead.

This figure is found by dividing the total overhead by the total prime costs of all jobs during a predetermined period preferably the previous twelve months. The actual dollars and cents will be practically the same as in Case I but the percentage naturally will be greater than in Case I.

Thus in the example given on the Recapitulation Sheet, the overhead is figured as 25 percent of the prime cost and amounts to $2277.28. Twelve thousand five hundred and twenty-five dollars is the figure finally arrived at as the bid price. Overhead divided by bid price, or $2277.28 ÷ $12525.00 equals only 18.2 percent on the selling price.

This method has some advantages, if due care is taken to use the correct percentages. The prime cost is the starting point, and it is much easier and simpler to add a percentage of this cost to cover overhead, and then add the profit. Having found the total cost, that is, the prime cost plus overhead, the estimator has arrived at an irreducible minimum, below which he knows he cannot go without incurring a net loss. To this figure he may add as much or as little as he thinks best for profit.

It is advisable to make it an invariable rule to show on the estimate sheet the overhead and total cost including overhead. Then if it seems expedient to make the bid less than cost, the deduction from cost should be shown as "Net Loss."

Another point in favor of applying an overhead percentage to the prime cost is the fact that for a certain job having a given prime cost, the overhead will be a fixed amount, while the selling price on this job might vary within quite wide limits.

When the contractor has ascertained his average overhead, figured either as a percentage on his gross sales or as a percentage of his total labor and material cost, this figure cannot be applied to every job regardless of its size, but must be varied, a percentage higher than the average being applied to the smaller jobs and a lower percentage being applied to the larger jobs.

Case III—*Overhead a Percentage of Labor.*—It has been proposed that all overhead be figured as a percentage of labor cost, also that it be handled as a fixed charge per hour of labor. Each of these plans has been used by a few contracting firms. Both have certain features which would seem to make them preferable to the method of using a percentage of the prime cost or of the selling price. This problem is receiving considerable attention at the present time and will be thoroughly studied when sufficient data can be collected.

Outline of Method of Proceedure in Estimating

It will now be well to summarize briefly the various steps to be followed is estimating a job. These are as follows:

1. Make a preliminary survey of the plans and specifications.

2. Rectify and complete the layout of the job.

3. Note on a sheet of Form 2 the specification requirements for cabinets, panelboards, switchboards, fuses, etc. Summarize these items as may be necessary before listing on Pricing Sheet. Request prices on special material.

4. Take off material for lighting branch circuit work, beginning with the lowest floor and taking each floor in order, and entering quantities on Form 1.

5. Take off material for telephone, bell and other low tension systems, entering on a separate sheet of Form 1.

(Continued on Page 31)

Meeting the Public's "Show Me" Attitude in Motor Repairs

How a Baltimore Electrical Contracting Concern Created Good Will for its Motor Repair Department by Readiness to Prove Itself

By RUEL McDANIEL

EUGENE I. ROSENFELD & COMPANY, 325 West Baltimore Street, Baltimore, Maryland, has built up a motor repair department that does an annual business that totals $50,000, by being right on the dot when the public said "show me" or "send me at once." In other words, this end of the company's business has been built by backing up its claim of good work and service and by going to a customer's aid when aid was most needed.

The company has been established in Baltimore some 30 years. There are a number of big departments, but the motor repair, through not so large as some of the others, is outstandingly profitable. How this was made so should be of interest to other electrical contractors, whose motor repair work is not so important and profitable as it might be.

"Briefly," explained Milton Erlanger, president and general manager of the company, "we have built our motor repair business by concentrating on a limited number of good customers and prospects, and then giving them the quickest service possible and a class of work that does not have price as its chief attraction."

Mr. Erlanger just then turned to a customer, to whom he spoke familiarly. "Here's a man," he said to me, "who sent his motor repair work to us for a considerable time, then switched to another shop. After a while he came back to us. Sam, this man wants to know how we get and hold customers. Suppose you tell him why you quit us and then came back?"

The customer straightened up and smiled. "Sure, I'll be glad to." Just then Mr. Erlanger excused himself for a moment to talk with another customer, and the middle-aged man whom he had addressed as Sam turned to me. "I own a string of electrical shoe repair shops here in town. This means that I have a considerable amount of motor repairing and overhauling to do. And when I do need a repair job, I need it badly; for a single dead motor can tie up several machines.

"For a considerable time I regularly called these boys when I needed a job done, for they had convinced me that they knew their businss. But their prices seemed a little high. Finally, right after I had received a rather large bill for the preceding month, along came a representative of another electrical repair shop who offered to do my work satisfactorily at a cost considerably less. Being human, I tried them out.

"For a while the service was satisfactory. But it was not long before they got to where they did not answer my calls promptly and the jobs failed to stand up as I thought they should. To make a long story short, I came back to these boys about two years ago, and I have been satisfied to pay their price since. Within ten minutes from the time I telephone them they have a man at my shop, ready to look over the crippled motor. And I know when they do a job that it is correctly done."

Mr. Erlanger says that service is his chief talking point against cut prices, and this shoe repair man's explanation of his experiences with the company pretty well sums up what the company means by service.

The company does not try to do motor repairing for everyone in the city. "After a considerable amount of experimenting," explained Mr. Erlanger, "we have found that it is more profitable for us to select a comparatively small list of reliable and fairly large users of electrical motors and then concentrate on this list.

"When we get a customer on our books we do not forget him and go on spending our efforts on a new prospect; but rather, we continue to confine our efforts to the original list by striving to get all of each customer's motor repairing.

Direct mail is one of the principal mediums used for selling motor repair service to shops and factories. Recently the company offered to make a power plant survey of a number of plants in Baltimore free of cost to the owners. This offer was made through a letter, carefully multigraphed, with names of prospects filled in on typewriter to match. This is the text of the letter sent:

"Would you be interested in getting a cut-rate from the Consolidated Gas Electric Light & Power Company?

A survey of your plant may show that through improper lighting or motor drives; to correct this is just getting a reduced rate from the Power Company.

We will be pleased to give you this information without charge or obligation. (All we ask is your good will)."

The letter went to five hundred owners of shops and factories using electric motors. The response was immediate. Request for surveys swamped the motor

"We Have Built Our Motor Repair Business by:—

Picking a limited number of good prospects and customers;

Concentrating our efforts on them.

Giving the quickest possible service;

Getting a fair price;

Making a complete and impartial power plant survey for a carefully selected list of prospects;

Centralizing on repairs rather than on new motor business."

—Milton Erlanger.

department; but every person requesting a survey got it in time.

The company went into the shops and factories, checked the motor drive, belt connections and tested the difference in cost of direct drive as compared to indirect. The subsequent report gave the owners concrete facts on their power costs, whether favorable or unfavorable to the Rosenfeld shop in the matter of immediate work orders.

The idea built a great deal of good will and not a little business. The plan was a far-reaching one in the matter of pulling power; business may come two or three years hence as a result of the data supplied by the company to plant owners.

The company's electric motor department is primary a repair shop. "We carry a few new motors," Mr. Erlanger explained, "but we do not push them, for they do not pay us a wide enough margin. A while back we sold a hundred thousand dollars' worth of new motors in a year, and we could still do so, but I don't think it is worth the effort in a general electrical repair and appliance shop like ours. We do sell a considerable number of used motors, which we take in trade, usually on repair work. These we can repair and sell at a fair margin of profit."

Annual Prize Awards Announced for Contractor-Dealers

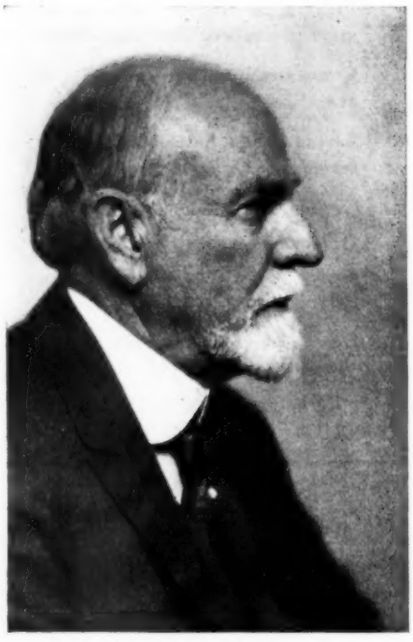
TO encourage individual initiative and creative thinking among electrical men, James H. McGraw, president of the McGraw-Hill Company, has established four annual awards, three to be competed for by the men of the manufacturing, jobbing and contractor-dealer branches of the electrical industry respectively, and the fourth to be open, in addition, to the men of the central station industry.

The awards will be presented in the first three instances to that man in each field who is judged to have made the most important personal contribution to improvement or progress in the advancement of either the processes or practices or policies of manufacturing, jobbing, contracting or merchandising. A fourth award will be given to that electrical man in any of the four branches of the industry who has contributed the most valuable and useful idea for promoting cooperation between any two or more branches of the electrical industry.

Each award will take the form of a bronze medal and $100.00 in gold. The Society for Electrical Development, which is acting as sponsor for these awards, has appointed a committee of awards which will prepare an appropriate medal and conduct the contests.

The Contractor-Dealers' Medal

Each year a medal and a purse of one hundred dollars will be awarded to the employee or official of any electrical contractor-dealer, contractor or dealer, of the United States or Canada, who during the year made the most constructive contribution to the commercial development of the electrical contractor-dealer industry through the suggestion of an idea that has been successfully applied to raising the quality standard or adequacy of wiring installations, the promotion of the market or the improvement of service in the installation or merchandising of electrical materials, equipment or appliances. The award will be made to that man whose submitted statement, endorsed by an executive of his company or any recognized electrical jobber with whom he deals, appeals to the judges as offering the greatest value to the electrical contractor-dealer industry.



James H. McGraw
Donor of Annual Contractor-Dealer Award

The medal for co-operation and purse of one hundred dollars will be awarded each year to that electrical man, an employee or official of any electrical manufacturing, jobbing, central station or contractor-dealer organization of the United States or Canada who during the year made the most constructive contribution to the promotion of co-operation and harmony between any two or more of the different branches of the electrical industry.

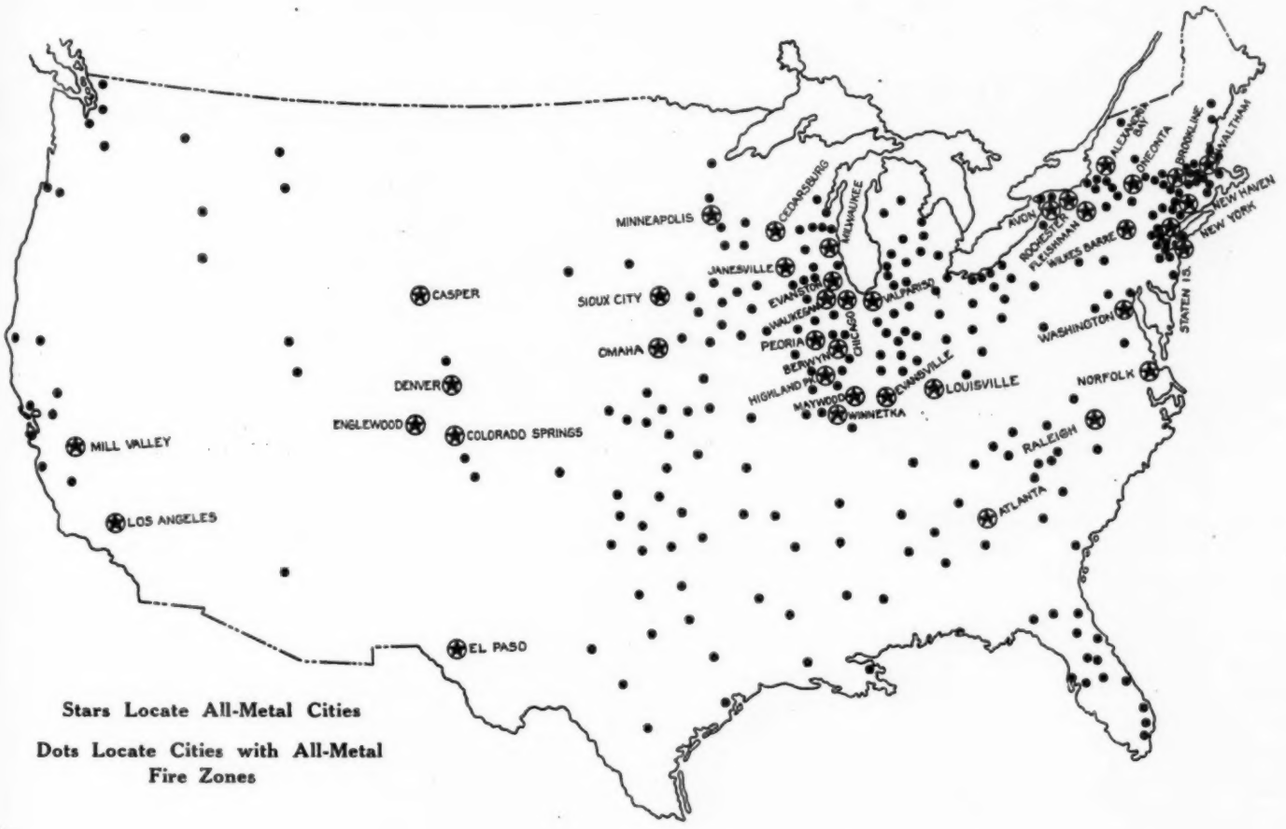
The awards have three objectives—

1. To give public recognition and reward for ideas which have been contributed to the common good by individuals of the electrical industry.
2. To give publicity to these ideas that they may have wider application and employment.
3. To stimulate and encourage electrical men to think constructively for the broad improvement of the electrical industry and to carry through the ideas that occur to them.

Each contestant must submit the record of his contribution in a statement presenting a full description of the idea and its application, typewritten on one side of paper only.

Entries for the contractor-dealer's award will be judged by a jury of five men, four of whom will be appointed by the Association of Electragists and one by Mr. McGraw.

The first competition for these four McGraw Awards will close on Sept. 1, 1925. Candidates must submit their statements not later than this date, addressed to The James H. McGraw Awards, in care of the Society for Electrical Development, 522 Fifth Avenue, New York City. The first presentations of the Contractor-Dealers Medal and the purse will be made in September during the annual convention of the Association of Electragists-International. Subsequent awards will be presented annually at the regular fall convention of this association.



Extent of All-Metal

Analysis Shows That Metal Protected Wiring is Required in Fire Zones of 285 Cities and Throughout the City in 38 Places

HUNDREDS of cities in the United States require either by ordinance or local inspection rulings all light and power conductors in new buildings in the fire zone to be metal enclosed. A study of local conditions in approximately 700 cities showed that in 285 of them All-Metal is required in the down town fire zones. These cities have a combined population of approximately 28,000,000 people.

The survey also revealed 38 cities, with a combined population of more than 11,000,000, requiring All-Metal entirely, or virtually so, throughout the city.

In a number of instances where there are no zone requirements, the ordinance calls for metal protection from the service up to the first outlet.

In one or two instances metal is required for all buildings including dwellings where the circuits exceed a certain number. In Memphis metal is required for all installations having more than six circuits and in Gary, Ind., conduit is required where more than one circuit is run.

There were two cases reported where the All-Metal zone requirement was not enforced.

Following are the names of all cities with All-Metal requirements in whole or in part received to date:

Alabama
- Birmingham
- Mobile
- Montgomery
- Sheffield
- Tuscaloosa

Arizona
- Phoenix

Arkansas
- Fort Smith
- Hot Springs
- Little Rock

California
- Eureka
- Fresno
- Fullerton
- Los Angeles*
- Mill Valley*
- Monterey
- Oakland
- Sacramento
- San Francisco
- Stockton

Colorado
- Colorado Springs*
- Denver*
- Englewood*
- Fort Collins
- Pueblo
- Trinidad

Connecticut
- Bridgeport
- Hartford
- Meriden
- New Haven*
- Waterbury

District of Columbia
- Washington*

Florida
- Bartow
- Daytona
- Eustis
- Homestead
- Jacksonville
- Lakeland
- Lake Worth
- Miami
- Oldsmar
- Orlando
- St. Petersburg
- Tampa
- West Palm Beach

Georgia
- Atlanta*

Augusta
Macon
Rome
Savannah

Idaho

Boise
Twin Falls

Illinois

Berwyn*
Bloomington
Champaign
Chicago*
Danville
Decatur
East Moline
East St. Louis
Evanston*
Freeport
Galesburg
Highland Park*
Joliet
Kankakee
Maywood*
Moline
Peoria*
Princeton
Quincy
Rockford
Springfield
Streator
Urbana
Waukegan*
Winnetka*

Indiana

Anderson
Connersville
Elkhart
Evansville*
Fort Wayne
Frankfort
Gary
Indianapolis
Kokomo
Lafayette
Mishawaka
Muncie
Shelbyville
South Bend
Terre Haute
Valparaiso*

Iowa

Burlington
Cedar Rapids
Council Bluffs
Davenport
Denison
Des Moines
Dubuque
Fort Dodge
Keokuk
Marshalltown
Mason City
Sioux City*
Waterloo

Kansas

Arkansas City
Chanute
Hays City
Kansas City
Liberal
Manhattan
Pittsburg
Salina
Topeka
Wichita

Kentucky

Lexington
Louisville*

Louisiana

Lafayette
Minden
New Orleans
Shreveport

Maine

Auburn
Portland

Maryland

Baltimore
Hyattsville

Massachusetts

Arlington
Brockton
Brookline*
Malden
Medford
Pittsfield
Salem
Somerville
Springfield
Waltham*
Watertown
Wellesley
Westfield
West Medford
Worcester

Michigan

Battle Creek
Ferndale
Flint
Grand Rapids
Holland
Ionia
Lansing
Niles
Pontiac
Royal Oak
Saginaw

Minnesota

Albert Lea
Lake City
Minneapolis*
St. Paul
Stillwater
Winona

Mississippi

Clarksdale
Jackson
Laurel

Missouri

Joplin
Kansas City
St. Joseph
St. Louis
Springfield

Montana

Great Falls
Missoula

Nebraska

Omaha*

New Jersey

Atlantic City
Bayonne
Dover
East Orange
Garfield
Newark
Paterson
Perth Amboy
Union

New York

Albany
Alexandria Bay*
Avon*
Binghamton
Fleischmanns*
Forestville
Fulton
Gloversville
Jamestown
Le Roy
Malone
Middletown
New Brighton
Newburgh
New York*
Niagara Falls
Oneonta*
Oswego
Rochester*
Rome
Schenectady
Staten Island*
Syracuse
Utica

North Carolina

Asheville
Charlotte
Concord
Fayetteville
Gastonia
Greensboro
Raleigh

Ohio

Akron
Alliance
Ashtabula
Barberton
Canton
Cleveland
Columbus
Lima
Lorain
Portsmouth
Sandusky
Springfield
Toledo
Wooster
Youngstown

Okalohma

Fairfax
Guthrie
Muskogee
Norman
Oklahoma City
Pawhuska
Sapulpa
Stillwater
Tulsa

Oregon

Astoria
Portland

Pennsylvania

Altoona
Harrisburg
Pittsburgh
WilkesBarre*

Rhode Island

Pawtucket
Providence

South Carolina

Columbia
Greenville

South Dakota

Chamberlain
Sioux Falls

Tennessee

Chattanooga
Johnson City
Knoxville
Memphis
Nashville

Texas

Beaumont
Dallas
Denison
El Paso*
Fort Worth
Galveston
Houston
Port Arthur
San Antonio
Wichita Falls

Utah

Ogden
Salt Lake City

Virginia

Danville
Norfolk*
Richmond

Washington

Bellingham
Centralia
Seattle
Spokane
Tacoma

West Virginia

Charleston
Fairmont

Wisconsin

Berlin
Cedarsburg*
Clintonville
Green Bay
Janesville*
Kenosha
Madison
Milwaukee*
Oshkosh
Plymouth
Sheboygan
Wausau
West Allis

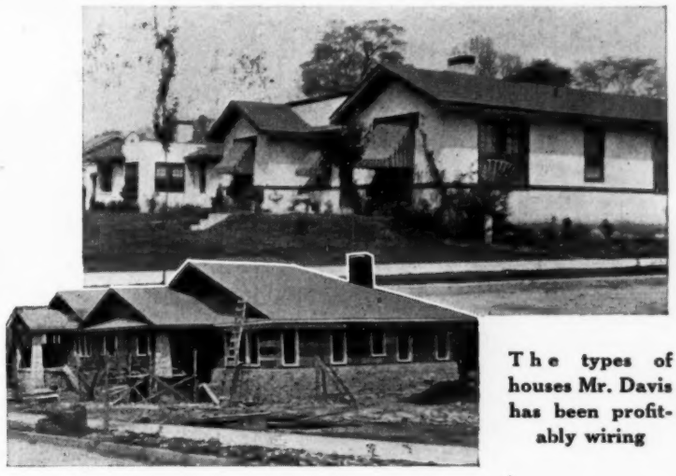
Wyoming

Casper*

*Denotes cities that require all-metal wiring everywhere.

How Davis Makes Money Wiring Speculative Houses

This Memphis Contractor Finds His Best Advertising is in Getting Jobs Done on Time



The types of houses Mr. Davis has been profitably wiring

IT is generally conceded that there is little or no money in wiring new houses that are built on speculation. Nevertheless there is an electrical contractor in Memphis who specializes in this work and who makes money, without having to cut his prices below those of the other fellow.

Numerous subdivisions are being opened up on the outskirts of the city and the builders are finding ready purchasers for five and six room brick bungalows.

As these bungalows are mostly four circuit knob and tube jobs, they do not come under the Memphis law that requires All-Metal for all construction having six circuits or more.

The service entrance is at the back porch as the cellar is only large enough for a furnace and coal bin. Service is lead in through conduit to the entrance switch, a distance of three to four feet, and thence through the ceiling beams to the various outlets.

The general layout of the majority of these bungalows is; wall switch and convenience outlet in every room, side wall brackets, ceiling outlets in all rooms but the dining room and living room, and suitable lights for the front and back porches.

A number of these subdivisions are being developed by different building contractors but virtually all the electrical work goes to the Davis Electric Company.

The interesting part of this is that Davis gets the jobs at his own figures. He doesn't have to cut his prices to meet competition.

His capital was limited at the start but he soon found that satisfied customers were his biggest assets and provided an advertising medium that was invaluable. So he decided to capitalize his ability to please people, and as a result is known in Memphis today as

C. A. Davis

"the man who gets the job done on time."

"I never lose a customer," said Mr. Davis. "Sometimes one will give a job to a competitor but the next time he has work to be done he comes to me."

One of the reasons why Mr. Davis holds his customers is because of his willingness to give cheerful service. On his desk is a note pad containing a memorandum of all work to be done that day.

Among the items are always to be found the day's inquiries for a socket repair, a new outlet here, an odd job there, etc. If it is at all possible, all such odds and ends are taken care of each day. In this way he finds he is continually adding to his list of satisfied customers and that he no longer has to go out and drum up trade.

Almost every day he gets a telephone call similar to the following:

"This is Mrs. Jones. I want a receptacle just like the one you put in for Mrs. Smith the other day." Mrs. Jones gets it—and on the same day.

Mr. Davis treats his bigger customers with the same promptness, and herein lies the secret of his success.

The moment a house is ready for the roughing in, a man goes out on the job. In a day and a half it is done. A job is never started and left in the middle if it is at all possible to work on it.

To the general contractor this is worth while because there is no delay on the job. Every day on speculative work is worth so much money to the contractor and if he can be sure the electrical man will get on the job the moment the house is ready for him, and stay until the work is all roughed in, he is willing to pay a little more.

One of Davis' competitors once offered to do the work he was doing on a development for $14.00 less per building, and at the same time telling the general contractor that Davis was as a rule 25 percent higher. The answer was that Davis could be depended upon, and while the general contractor knew the work could be done cheaper, he had had experiences with other men and preferred to pay a little more with the assurance that the work would be done on time, rather than have the lathing and plastering held up by violations and inefficiency, etc., thus eventually losing what little money he would save at the start.

Mr. Davis has not confined his work to the wiring of bungalows, however,

Mr. Davis has also found time to wire the church on the left and several stores like those on the right

but has found that the service he gives these general contractors has resulted in his being called in on any other work they may be doing, such as churches and stores.

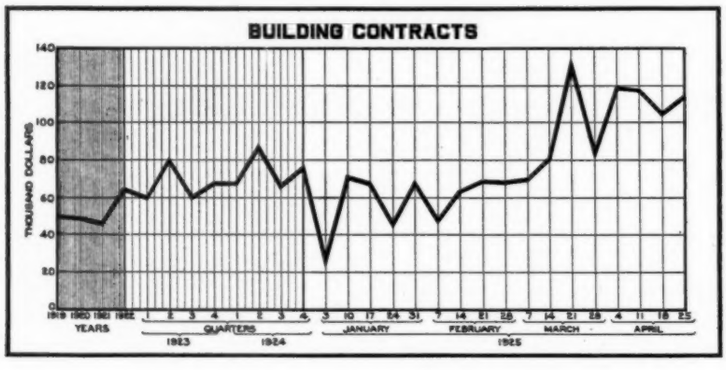
He does considerable time and material work and has several real estate operators who call on him for installations and repairs. Much of his work is on contract because the builder has to know how much he must sell the building for. When asked about his mark-up Mr. Davis promptly said 50 percent. He claims his overhead is around 28 percent.

He generally acts as his own superintendent but if considerable work is under way at once he promotes one of his best men until the rush is over.

Before any job is turned over to a customer Mr. Davis must be satisfied that the customer is satisfied. In this way complaints are reduced to a minimum and friends gained.

His place of business is just on the edge of the business district and the rent is small. He has a small store but makes very little attempt to do a merchandising business, his stock being almost entirely wiring supplies and lamps.

New Building Market Setting New Records



Like almost every other line of business, electrical contracting has been in what is known as a "spotty" condition for months. Some shops are very busy while others are very quiet. Where building started up early, as it did in some Southern cities, the contractors were generally quite active. In other places where new building was more or less at a standstill electrical contractors were busy or not, according as they had gone out and unearthed new business.

New construction is, by and large, the gage of the level of the electrical contracting business. It does not constitute anything like the entire market, but it is such a large part that its ups and downs affect electrical contracting proportionately.

Accordingly there is presented here a brief summary of the situation in the building industry. It gives a very hopeful picture.

The graph was drawn from data furnished by the Department of Commerce and shows the weekly volume of contracts awarded. Subsequent Dodge Building Statistics bear these figures out.

As will be seen, January and February showed a small volume of contracts awarded. March and April, however, were so good as to offset the two poor months and establish a new record for contracts during a four month period.

The time that elapses from the award of the contract to the beginning of the electrical work depends of course upon a great many items. In a dwelling it probably will not amount to more than a few weeks while in a large building where the excavation work is quite difficult it may be a year or more.

The new contract curve, however, indicates most clearly that electrical contractors can expect to have more and more opportunities to figure.

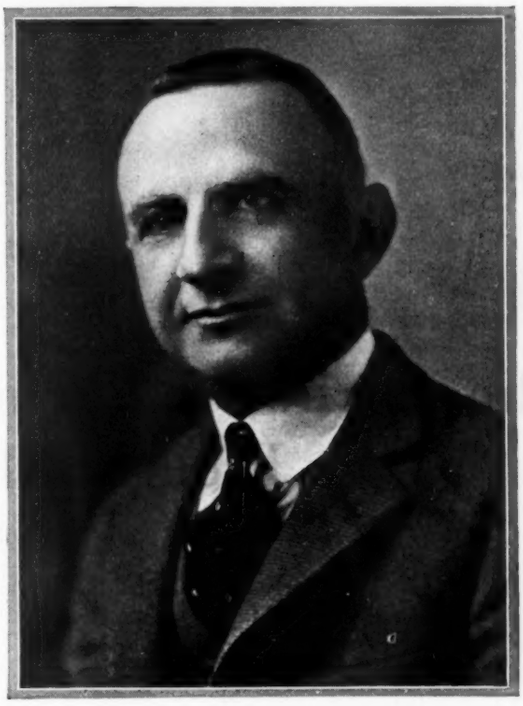
The new building demand has been good nearly everywhere, except in the New York State and Northern New Jersey district and in the west North Central States.

However April contracts were a decided improvement in these sections. The New York building market went on a strike because of prices according to one authority, and when in March these were readjusted, purse strings were again loosened.

With such conditions ahead, there should be less incentive for contractors to load up with unprofitable work just to pay for overhead. Certain it is that those who do will regret it later when the market gets more active.

Electragists You Should Know

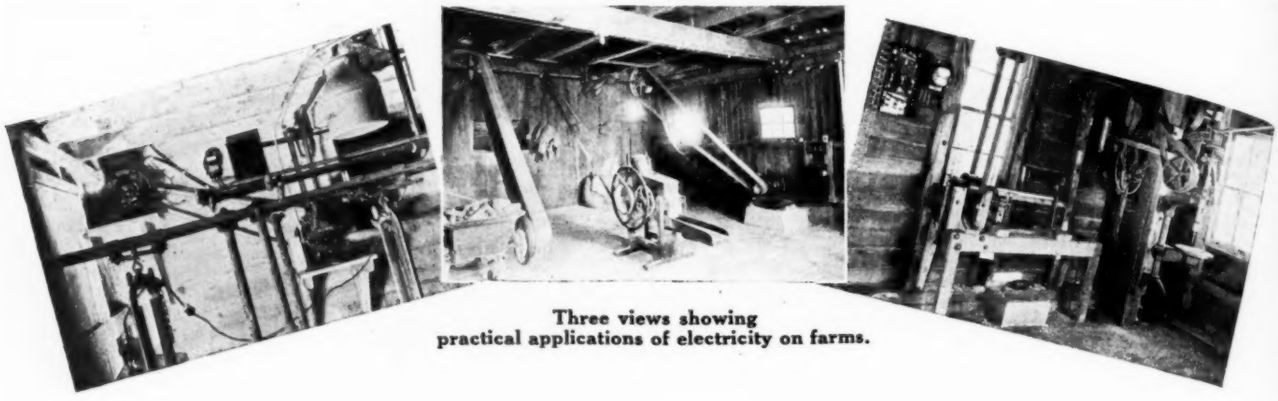
Louis Kalischer, Brooklyn



Louis Kalischer exemplifies the truth of the saying, "If you want to get something done, turn it over to a busy man." For he is president of three business firms, secretary of a fourth, and either an officer or an active member of nine business associations. And he is a success in all thirteen capacities. He is a Brooklyn product, having been born there in 1874. His business experience dates from his eleventh year, and includes such diverse occupations as candy-making, filling sausage skins and repairing doorbells. Before long he had risen to be foreman at an electrical plant and was statistician of an electricians' union organization. The latter post he held for 12 years. By 1897 he had become superintending engineer for George J. Gould's residence at Lakewood, N. J., a position he held for three years. The next five years he put in as foreman of various big electrical jobs and in 1905 decided it was time to sell his experience and ability for his own profit. Louis Kalischer, Inc., has gone ahead steadily since then and the company now does one of Brooklyn's largest contracting businesses. In addition to being president of this firm, Mr. Kalischer heads the Electrical Exchange, Inc., and the Gerritsen Electric Company and is secretary of the Carlton Ice Company. He is on the legislative committee of the Brooklyn Chamber of Commerce, the board of governors of the Electrical Board of Trade of New York, is chairman of the membership committee of the Brooklyn Engineers' Club, honorary chairman of the Electrical Contractors of Brooklyn and Queens, and a member of the New York Electrical League, New York State Association of Electrical Contractors, New York Electrical Society and of the Kiwanis Club.

Roydan R. Douglas, New Orleans

One of the foremost electrical contractors of the South is Roydan R. Douglas, president of the Douglas Electric Construction Company, Ltd., of New Orleans, whose installations have been made in most of the Southern states and even in Mexico. Mr. Douglas was born in Edinburgh in 1868. He received his early education there and later attended the Military College of England. His military service includes the expedition up the Nile, under Lord Wolsley, to the rescue of General Gordon at Kharthoum. He emigrated to Mexico City in 1892 and established an electrical business, later moving its headquarters to New Orleans, though he still continues to do work in Mexico. In the years since his arrival in this country he has risen to a commending position in the industry. Governor J. Y. Sanders of Louisiana appointed him a member of the state board of electrical engineers in 1908 and Governor Ruffin Pleasant appointed him a member of the Board of Public Utilities in 1916. Some of the latest installations made by his company include the Times-Picayune Building, the John Dibert Memorial Building, the Capdau, Destrahan and Hanville schools, and the new United Fruit Company Building in New Orleans. He is a member of the Contractors and Dealers Exchange of New Orleans, the Louisiana branch of the A. E. I., the New Orleans Code Committee of the A. E. I., and of the New Orleans Association of Commerce. He is now serving as president of the Sub-Contractors Association of New Orleans and is a director of the Electrical Contractors Association of that city. At one time he served as director from Louisiana on the National Electrical Board.



Three views showing
practical applications of electricity on farms.

The Wiring of Farm Buildings Opens New Field to the Electragist

By Charles H. Huntley

COMPARATIVELY few electragists have thought of the wiring of farm houses and buildings as offering much business or calling for any special study. Yet it is a field of considerable promise and presents distinct wiring conditions and problems.

While it is true that only five or six percent of the approximately 6,500,000 farms in the United States are receiving electric service at present, a definite, systematic study of farm electrification is being made today that promises much for the future. Experiments are being conducted in Minnesota, North Dakota, Alabama and elsewhere under the auspices of the Committee in the Relation of Electricity to Agriculture, in which are represented organizations of farmers, agricultural engineers, light and power companies, etc., to find out just what electricity can do for farming in saving labor, time and money, and promoting efficiency.

Hence the electragist whose trade territory includes farming sections will do well to regard the farms as a worth while source of future business. Moreover, he will begin to study the matter now, before any considerable demand begins, to learn the conditions and problems of wiring farm buildings.

The most superficial survey will show that they differ somewhat from those he has encountered in the city or village. For example, while the wiring of a city home may in a sense be said to begin at the front door, that of the farmhouse logically begins at the back door —the door by which the house is most frequently entered. In fact, there are any number of farmhouses whose front doors are almost never used.

Freedom from interruptions of service, and from the danger of fire, is even more important in the country than in the city; it is not a case of blocks, but of miles, to the nearest electragist when an injury to the wiring system suspends service, and there is no fire department to answer an alarm in case of fire.

Here, then, is need of especial care in planning and installing the wiring system. It must be absolutely safe and must give uninterrupted service under farm conditions. It is incumbent on the electragist to find out what these conditions are. Particular attention should be given the wiring of barns and outbuildings, where the factor of risk of mechanical injury to the wires is encountered. The gnawing of insulation by rats and other rodents is an equal, if not a greater danger in the country than in the city. An all metal installation, whether of the flexible or conduit type, in these buildings is advisable, even if knob or cleat wiring might pass inspection.

The farm must be considered as an industrial plant as well as a home. Yet there are certain differences between it and the typical small plant. There is a greater diversity of machinery to be driven, and this machinery is scattered instead of being compactly grouped. Much of it will be operated by a portable motor on a truck that can be taken from place to place. Outlets for attaching the motor should therefore be sufficiently numerous to make a long lead unnecessary. The possibility of shifting various pieces of farm machinery to more compact arrangements, thus lessening the amount of wiring required, is a matter that will stand considerable study.

The principal factor that has sold electrical science to the farmers who have obtained it has been convenience. The farmer has wanted the convenience —and the safety—of electric lights. Power uses, particularly for household devices and for some of the smaller farm machines, has also been an argument; but comfort has been the mainspring.

The idea of convenience having already been sold, to a large extent, one of the difficulties in the way of selling an adequate equipment of switches is thereby minimized. The idea of a three-way switch to enable him to turn on a light in the barn, from the house or from the barn, and of being able to control the chicken house, garage and yard lights from the house, will carry a special appeal. The intelligent placing of switches in barns in the handiest and most practical locations is one of the important features of the wiring of farm buildings.

It is well worth the while of any electragist to obtain diagrams of several typical farm buildings in his section and, if he is not already thoroughly

acquainted with working conditions on farms, to learn what they are. So seemingly unimportant a matter as the location of a lamp switch with reference to a stable door, the stalls and the runway may be a matter of considerable importance to the farmer.

The wiring systems of a very large percentage of farms may well be planned with the thought in mind that eventually, current will be obtained from a central station distribution line, even if an individual farm light and power set is to be used at the time the wiring is installed. These individual sets are rendering a distinct benefit. They make it possible for the farmer who is beyond the territory covered by central station lines to obtain a limited electrical service. It will be a long time before some farms will be able to get current from the central stations. Nevertheless, the electrification of the farming industry on any important scale must finally come through central station service. In planning the system, also, it will be well to remember that as the electrification of the farm proceeds, it will develop new applications. For instance, the use of fans for drying hay and other forage crops in mows and bays may become very popular. Provision made for possible requirements of this kind, when it is feasible to make them, will render future work easier.

How Much Safer This Lighting is Than the Old Fashioned Kerosene Lamp

It is fair to assume, also, that many of the heavier electrically driven machines, such as threshers, hay balers, concrete mixers, etc., will be taken from farm to farm. Provision should be made for attaching them most conveniently and efficiently.

There may be a tendency on the part of some farmers to try to do their own wiring unless the electragist is prompt in presenting his arguments for expert workmanship. In many families there is a son who has studied elementary electricity to some extent in school. He has come into contact with it in connection with automobiles and radio. The farmer can buy wiring supplies from the mail order houses, and in some cases there is a likelihood that the boy will be depended on to do the work unless the electragist emphasizes the necessity of having the work done properly.

A light and power company man remarked recently that he found one farmer who, in extending a line from his house to his barn, had used rings of bone to insulate the wires, and inside the barn had fastened the wires to the beams with common staples. The likelihood of the electragist's having to compete with one who should be a customer is perhaps greater in the country than in the city. It carries with it the necessity of his making a special effort to sell his services.

The electrification of any industry is a matter of importance to the electragist. It contains manifold opportunities of new business. In one way the electrification of the agricultural industry offers more than various others. The farm is, as stated, a small manufacturing plant. In the aggregate there will be more wiring than if the industry were centralized in fewer, even if larger, units.

The wiring of farm houses and buildings will offer not merely a business opportunity, but an opportunity for service. The electrification of the farm contains the promise of the solution, in some degree, of the problem of city congestion, i. e., greater yields and better products on the farms, and much better living conditions in the country districts. All these things will make for a better and happier nation. And the electragist who has no vision of service as well as profits takes a small view of his business.

He will have an important part in furthering farm electrification. More than this, he will do much to promote or to retard it by the kind of work he does, which will involve careful planning, the best of workmanship and the use of quality materials. The last factor is of the utmost importance, as service conditions in the country are more trying than in the city.

Word-of-mouth advertising is more general and more effective in the country districts than in the urban community. A satisfied customer is a decided asset; a dissatisfied one quite the reverse. This truism has especial force when the customer is a farmer.

Electricity seems destined to play a decidedly important part in farming and in living conditions on the farm. It is time for the electragist to consider how he may do his share in this development.

Estimating for Electrical Contractors

(Continued from Page 22)

6. Take off material for feeder and motor circuits and enter on Form 2.

7. Summarize feeder and motor circuit material on Form 3.

8. Having finally arrived at net quantities of material on Forms 1 and 3, enter all items on Pricing Sheets, Form 4.

9. Calculate the Job Factor.

10. Price and extend the material and labor and foot up amounts. Apply the Job Factor to the branch circuit labor and other floor and wall work as required.

11. Carry forward all totals from Pricing Sheet to Recapitulation Sheet, Form 5.

12. Make the necessary allowances for miscellaneous material and labor and estimate the non-productive labor. Foot up total material cost and total labor hours. Compute the average wage rate per hour and multiply this by the total hours to arrive at the labor cost. Estimate the cost of all items of job expense, total all costs and complete the estimate by adding overhead and profit to arrive at the selling price.

The Electragist

Official Journal of the
Association of Electragists—International

S. B. WILLIAMS
Editor

ALFRED BATSON
Associate Editor

Accident Expense

Compensation and liability insurance is a growing expense to contractors. It is growing because insufficient attention is being given by contractors to accident prevention.

Any contractor who believes that by the payment of a certain premium he is fully covered and has nothing to worry about, is making a big mistake.

If the losses keep mounting the premiums or cost of insurance will rise proportionately. If the cost of insurance is to be kept down, the accident record must be kept down.

But premiums are not all the cost by any means. The contractor makes money in proportion to the number of hours of productive labor on his payroll. Accidents reduce this number.

Accidents break down morale of the other employees for a certain period following each accident. During this time little is accomplished and what is done is frequently not well done. This slowness and poor work, which may have to be done over, is a direct expense on the contractor.

Injuries reduce the efficiency of those hurt, for they are a little hesitant about doing the same class of work for some time afterwards.

Men should be encouraged to use reasonable care about their work. A lower accident list will be found to be far more profitable.

The McGraw Award

Elsewhere in this issue is an announcement of an annual award of a medal and one hundred dollars for the year's most constructive contribution to the development of the electrical contractor-dealer industry. The thought which prompted this award was that the men of this industry should be encouraged to "think and do."

The donor, a publisher of numerous electrical and other engineering magazines, has always been a champion of individual initiative and effort. Such an idea should be encouraged by the men of the electrical contracting and dealing industry by sending in their contributions.

To submit a contribution is not difficult. The award is not necessarily made to a big achievement. What may seem big to one man may not appear so to the judges.

The sole criterion will be—Has it been a constructive service to the industry or to our branch of the industry?

If there are any questions in any one's mind write to the committee or to this office, but above all send in your contribution. Let us show that electragists have contributed ideas that build.

Overhead on Labor

In the adoption of the principle of including overhead in the charge for labor only, one must be careful of the method employed. Labor has a different hourly scale in different cities, and even within the same city, and frequently within the same shop. To charge overhead as a percentage of the payroll may, in many places, not bring altogether the desired result. A fixed percentage of the payroll would mean that a man with a higher wage would carry a greater overhead when he should, theoretically, be charged with less overhead. A change in wages would mean on a fixed percentage basis that with an increase, the contractor would be charging more overhead, and with a decrease, a lower overhead, although the actual overhead cost is unchanged. If a contractor does work in more than one city and uses local labor he will find his figures do not conform to conditions should he use a fixed percentage of payroll.

By far the safer way would probably be to derive overhead as a percentage of total labor hours and then add to the wage a certain amount for each hour.

Lamp Prices

There has been some criticism of the present odd-cent prices of certain sizes of incandescent lamps. The contractor-dealers say that it is a nuisance to have to make penny change. A number in fact are holding to the thirty cent price.

There is no doubt but that odd cent prices do make more or less bother, but it must be remembered that the prices of lamps have been brought down to such a low price that even one cent changes make quite a difference to the manufacturers.

The policy of the lamp producers has been to share with the public all savings due to increased volumes, lower costs of production or to new and improved methods of manufacture. Nor has it been their policy to wait until this saving

has reached a considerable amount but lower prices have been put into effect whenever it was apparent that they were justified.

To follow out such a policy has meant of course that price reductions, while frequent, cannot be large. It is a policy that is made for the public rather than the convenience of the dealer.

Since the dealer never has to take an inventory loss on lamps due to price reductions he should welcome such a policy. There is only one point in this connection that might be brought out and that is the lower return per lamp to the dealer. Discounts remain fixed and with lower prices there is less per lamp for the dealer.

However, it would seem that lower prices might serve to stimulate better buying by the public and while there may be less for the dealer in each lamp there will be more for him through greater sales.

The dealer has much to be thankful for in the policy of lamp distribution because of a stabilized market. The manufacturers want to keep it functioning smoothly with the electrical dealer as the primary outlet. They will welcome suggestions at any time.

Follow Up

It was never easier for the contractor to start selling better lighting in homes that have electric service than it is now. The manufacturers of lamps and others have developed standard data that is easy to use. The public has heard a lot about good lighting due to the Lighting Educational Campaign.

Such work carries a good profit and is nice work. Just as a starter why not try to get one such job a week?

Reinspection

A man well known in the industry said not so long ago that he would like nothing better, as a money maker, than to handle a number of unapproved electrical materials. This was said in all seriousness.

It was a little startling at the time but the more one studies it the more one sees why such a situation can exist. Non-electrical stores such as hardware stores, five and ten cent stores, cut price shops and others are looking for something to sell on price. The public installs it without the aid of an electrical man. Even some irresponsible contractors will use the material in places that they know are not going to be inspected.

Such a condition is a terrible indictment of the electrical industry and the reason is due solely to our apparent inability to get reinspections. This cheap shoddy material which costs less to make than approved products, can be sold for less and is finding its way more and more into extensions and additions.

If ordinances were drawn up in such a way as to require reinspection at regular intervals, say every three years, there would be less of this material used.

The Underwriters are behind the National Electrical Code and approved devices for all new work. Does not the same standard hold after the building is erected? If so why do they not go after reinspections harder?

The New York department has indicated how important this reinspection work is. It would seem as though the insurance interests would demand it as a regular activity everywhere.

The contractor who uses cheap "bootleg" material could be called to task by reinspection. The householder would be less inclined to do his own electrical work. It is well worth the contractors' while to work for adequate and regular reinspection.

Feeder Sizes

How large should a feeder be? There is little uniformity of opinion on this subject.

If there were forty branch circuits for lighting only, what should be the factor for diversity of use, if any? If the circuits happened to connect small motors, what should the diversity factor be? Should a diversity or, as it is more frequently called, a load factor be allowed in small installations? What is the minimum number of circuits for which diversity can be recognized? Then again do certain types of installations have any special effect, as for instance a block of stores in one building? Where subfeeders cannot take advantage of load factor, can the feeders take advantage of it as in an apartment house or an office building?

Inspectors are not agreed on this subject. Some are very strict in holding to the 15 ampere rule right through to the meter. Others are lenient.

The subject will always be a debatable one, but it does seem as though some rules might be drawn up that will at least serve as a guide.

Does Quality Work Pay?

In every town there will be found contractors who will say that the customer is interested in price and not quality and even if one did a quality bit of work the next job this customer had would go to the low bidder. If you tell these contractors that others have been successful in building a list of customers on the basis of quality work they will shake their heads and simply remark that conditions are different.

That is the fallacy. Human beings are the same every where. It all depends on how they have been educated. If they have had nothing but "just as good a job for less money," they will not know anything about "the better job for more money."

The contractors who have been "doing work for others as they would have it done for themselves" are successful. Two such examples are described in this issue.

If one contractor can build a business on quality work, so can another.

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687 Mission Street
San Francisco, Calif.

Union Shop Section
L. K. Comstock,
21 East 40th Street
New York City

AT LARGE
W. A. Jackson
37 West Van Buren St.
Chicago, Ill.

COMMITTEE CHAIRMEN

Architects and Engineers (including Jurisdictional Awards)
E. McCleary
2470 Grand River W., Detroit, Mich.

Code
A. Penn Denton,
512 So. W. Blvd., Kansas City, Mo.

Conventions and Meetings
Joseph A. Fowler
118 Monroe Ave., Memphis, Tenn.

Cost Data
J. H. Schumacher
187 Portage Ave., Winnipeg, Man.

Credit and Accounting
J. F. Buchanan
1908 Sansom St., Philadelphia, Pa.

Electragists' Data Book
E. C. Headrick
87 Broadway, Denver, Colo.

Legislation
J. F. Buchanan
1904 Sansom St., Philadelphia, Pa.

International Relations
R. A. L. Gray
85 York St., Toronto, Can.

Liability Insurance
Joseph A. Fowler
118 Monroe Ave., Memphis, Tenn.

Membership
C. L. Chamblin
687 Mission St., San Francisco, Calif.

Publication
L. K. Comstock
21 East 40th St., New York City

Radio
E. C. Headrick
87 Broadway, Denver, Colo.

Standardization
W. A. Jackson
37 West Van Buren St., Chicago, Ill.

Trade Policy
(Covering Manufacturers, Central Stations, Jobbers and Merchandising)
W. Creighton Peet
70 E. 45th St., New York City

U. S. Chamber of Commerce
L. K. Comstock
21 E. 40th St., New York City

Past Presidents of the National Electrical Contractors' Association

Charles L. Eidlitz.....1901-1903
E. McCleary 1903-1905
James R. Strong.....1905-1908
Gerry M. Sanborn.....1908-1910
*Marshall L. Barnes.....1910-1912
Ernest Freeman 1912-1914
*Deceased
John R. Galloway.....1914-1916
Robley S. Stearnes.....1916-1918
W. Creighton Peet.. 1918-1920
James R. Strong.....1920-1925

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State	Chairman	Secretary
British Columbia:	P. F. Letts 3044 Granville St., Vancouver	J. Hart 323 B. C. Elec. Bldg., Vancouver
Alabama:	J. R. Wilcox 313 N. 19th Street Birmingham	D. B. Clayton Am. Trust Bldg., Birmingham
California:	Victor Lemoge San Francisco	Walter F. Price 318 Call Bld., San Francisco
Colorado:	W. A. J. Guscott 1100 California St., Denver	E. A. Scott 615 Fifteenth St., Denver
Connecticut:	N. B. Fitch New Haven	Wilbur M. Peck 264 Gr'nwich Av., Gr'nwich
Florida:	Preston Ayers Orlando	Charles E. James Fort Pierce
Indiana:	T. F. Hatfield 102 S. Meriden St., Indianapolis	A. I. Clifford 507 Odd F. Bldg., Indianapolis
Iowa:	R. Honneger 516 W. 3rd St. Des Moines	C. E. Gourley Cedar Rapids
Kansas:	R. M. Sutton 123 N. Market St., Wichita	Charles Dalrymple Wichita
Louisiana:	Robley S. Stearnes 24 Carondelet St., New Orleans	I. G. Marks 406 Mar. Bk. Bldg., New Orleans
Maryland:		G. S. Robertson 417 Park Bk Bdg., Baltim're
Michigan:	W. F. Fowler c-o Barker-Fowler Electric Co., Lansing	E. P. Blackman c-o Motor Shop Battle Creek
Missouri:	A. J. Dunbar Frisco Bldg., St. Louis	G. E. Haarhaus St. Louis
Mississippi:	W. F. Johnston Meridian	A. H. Jones McComb
New Jersey:	Henry M. Desaix Paterson	Robert Beller Newark
New York:	C. C. Miller Oneonta	H. F. Janick 235 Berlin St., Rochester
North Carolina:	N. L. Walker Raleigh	F. E. Robinson Charlotte
Ohio:	C. L. Wells Akron	O. A. Robins 1517 Franklin Ave., Columbus
Pennsylvania:	F. Lloyd Smith 250 Wyoming Av., Scranton	M. G. Sellers 1202 Locust St., Philadelpha
Tennessee:	Emmett Scott 115 W. 7th Street, Chattanooga	J. A. Fowler 118 Monroe Ave., Memphis
Texas:	T. L. Farmer 1809 Main St., Dallas	J. W. Read 715 Capitol Ave., Houston
Wisconsin:	L. W. Burch 202 E. Wash'n Ave., Madison	H. M. Northrup 25 Erie St., Milwaukee

List of Local Associations

STATE AND CITY	LOCAL SECRETARY	STREET ADDRESS
ALABAMA		
Birmingham (C)	J. R.Wilcox	2017 First Avenue
CALIFORNIA		
Fresno (C)	Clyde L. Smith	1162 Broadway
Long Beach (L)	V. Ringle	So. Cal. Edison Co.
Los Angeles (C)	Helen I. Mikesell	1009½ S. Hill St.
Oakland (C)	Laurence R. Chilcote	Hobart & Webster Sts.
Sacramento	L. W. Sherman	910 Ninth Street
San Francisco (C)	E. E. Broune	522 Call Building
COLORADO		
Colorado Springs (C)	Matt Whitney	208 N. Tejon St.
Denver (C)	Edwin A. Scott	615 Fifteenth Street
Pueblo (C)	E. F. Stone	So. Colorado Power Co.
CONNECTICUT		
Hartford (C)	A. A. Angello	473 Park Street
Waterbury (C)	D. B. Neth	107 West Main Street
DIST. OF COLUMBIA		
Washington (L)	R. W. McChesney	Munsey Building
FLORIDA		
Jacksonville (C)	W. H. Secrist	c|o Bay-Secrist Elec. Co.
Miami (C)	E. A. Robinson	118 N. W. First Ave.
GEORGIA		
Atlanta (L)	W. W. Barr	75 Marietta Street
Savannah (L)	Sylvan M. Byck	Byck Electric Co.
ILLINOIS		
Chicago Electrical Contractors' Association	J. W. Collins	160 No. LaSalle St.
Master Elec. Contractors' Association	F. J. Boyle	175 W. Washington St.
Decatur (C)	Earl Weattherford	114 East William St.
Peoria (C)	L. B. Van Nuys	238 So. Jefferson St.
Rockford (C)	Donald Johnson	106 North Second St...
Springfield (C)	A. D. Birnbaum	916 West Cook St.
INDIANA		
Gary (C)	A. B. Harris	570 W. Washington St.
Indianapolis (C)	R. E. Snyder	704 No. Alabama St.
Terre Haute (C)	C. N. Chess	523 Ohio Street
IOWA		
Davenport (C)	Louis F. Cory	510 Brady Street
Sioux City (C)	E. A. Arzt	211 Fifth Street
Waterloo (C)	R. A. Cole	Cole Bros. Elec. Co.
KANSAS		
Salina (C)	G. R. Pizarro	146 So. Santa Fe St.
Wichita (C)	P. W. Agrelius	Wichita
KENTUCKY		
Lexington (C)	J. H. Brock	235 East Main St.
Louisville (C)	C. L. W. Daubert	921 South Third St.
Paducah (L)	K. H. Knapp	c-o Paducah Electric Co.
LOUISIANA		
New Orleans (C)	I. G. Marks	406 Mar. Bk. Bldg.
Shreveport (C)	R. L. Norton	620 Marshal Street
MARYLAND		
Baltimore (C)	George S. Robertson	417 Park Bank Bldg.
MASSACHUSETTS		
Haverhill (C)	H. W. Porter	14 West Street
Malden (Medford, Everett and Melrose) (C)	H. J. Walton	c-o Malden Electric Co.
Springfield (C)	A. R. Tullock	11-12 Court House Place
Worcester (L)	John W. Coghlin	259 Main Street
MICHIGAN		
Grand Rapids (C)	T. J. Haven	1118 Wealthy St., S.E.
Saginaw (C)	E. T. Eastman	209 Brewers Arcade
MINNESOTA		
Duluth (L)	Morris Braden	c-o Minn. Power & Light Co.
Minneapolis (C)	W. I. Gray	209 Globe Building
MISSOURI		
Kansas City (C)	A. S. Morgan	4 E. Forty-third St.
St. Louis Electragists' Ass'n (C)	W. F. Gersner	120 No. Second St.
Electric Employers' Association (C)	G. L. Gamp	Wainwright Bldg.
NEBRASKA		
Lincoln (L)	George Ludden	1329 N Street
Omaha (L)	Israel Lovett	c-o City Hall

(C) designates exclusively Contractor-Dealer organization.
(L) designates an Electrical League.

STATE AND CITY	LOCAL SECRETARY	STREET ADDRESS
NEW JERSEY		
Long Branch (C) (Asbury Park and Red Bank)	Austin Hurley	Campbell Ave., Long Branch
Newark (C)	John Caffrey, Jr.	435 Orange Street
Paterson (C)	R. Marshall	479 Market Street
Philipsburg (See Lehigh Valley, Pa.)		
NEW YORK		
Brooklyn (C)	H. F. Walcott	58 Third Avenue
Jamestown (C)	Henry M. Lund	309 Main Street
Nassau-Suffolk (C)	Henry T. Hobby	55 Front Street, Rockville Centre, L. I.
New York City		
Section No. 1 (C)	M. J. Levy	70 East 45th Street
Independent (C)	Albert A. A. Tuna	127 East 34th Street
Metropolitan (C)	George W. Neil	96 Beekman St.
Oneonta (C)	B. B. St. John	433 Chestnut Street
Rochester (C)	Theo. T. Benz	278 State Street
Schenectady (C)	Richard Spengler	421 McClellan Street
Syracuse (C)	Fred P. Edinger	802 East Water St.
Utica (C)	W. C. Ballda	228 Genesee Street
Yonkers (C)	Louis Mayer	485 South Broadway
OHIO		
Akron (C)	E. C. Rishel	540 East Avenue
Canton (C)	H. A. Hastings	301 New Vickery Bldg.
Columbus (L)	Ernest A. Sims	37 East Main Street
Cleveland (C)	Frank T Manahan	c-o Elec. Cont. Assn., Statler Hotel
Dayton (C)	Clarence Carey	1107 South Brown St.
Marion (C)	O. H. Cornwell	147 South Main St.
Massilon (C)	F. D. Mossop	c-o Mesco Electric Co.
PENNSYLVANIA		
Allentown (see Lehigh Valley)		
Bethlehem (See Lehigh Valley)		
Catasaqua (See Lehigh Valley)		
Chester (C)	W. H. McMillan	12 West Third Street
Du Bois (C)	C. E. Blakeslee	Du Bois
Easton (See Lehigh Valley)		
East Stroudsburg (See Lehigh Valley)		
Emans (See Lehigh Valley)		
Hellertown (See Lehigh Valley)		
Lehigh Valley (C)	A. W. Hill	Main and Market Sts., Bethlehem
Northampton (See Lehigh Valley)		
Palmerton (See Lehigh Valley)		
Philadelphia (C)		1202 Locust Street
Pittsburgh (C)	M. G. Sellers	1404 Commonwealth Bld.
Slatington (See Lehigh Valley)	Fred Rebele	
Wilkes-Barre (L)	Ambrose Saricks	25 No. Main Street
SOUTH CAROLINA		
Charleston (L)	J. P. Connolly	141 Meeting Street
TENNESSEE		
Chattanooga (L)	P. W. Curtis	725 Walnut Street
Knoxville (L)	Jerry G. Pason	303 West Church St.
Memphis (L)	J. J. Brennan	12-16 So. Second St.
Nashville (C)	J. T. S. Lannon	c-o Electric Equip. Co.
TEXAS		
Beaumont (C)	J. A. Solleder	Houston & Bolivar Sts.
Dallas (C)	P. B. Seastrunk	2032 Commerce St.
Houston (C)	J. W. Read	715 Capitol Avenue
UTAH		
Salt Lake City (C)	C. Lamont Felt	18 West Second St.
VIRGINIA		
Lynchburg (C)	J. L. Fennell	c-o Fennell & App
Norfolk (L)	K. D. Briggs	227 Arcade Bldg.
WASHINGTON		
Seattle (L)	P. L. Hoadley	Seaboard Building
WISCONSIN		
Green Bay (C)	V. E. Grebel	531 S. Broadway
Madison (C)	Otto Harloff	602 State Street
Milwaukee (C)	R. H. Grobe	156 Fifth Street
CANADA		
Montreal (C)	George C. L. Brassart	674 Girouard Ave.
Vancouver (C)	James Hart	323 B. C. Electric Bldg.
Winnipeg (C)	Sydney F. Ricketts	76 Lombard Street

Radio Service Hints

The day of the radio fan is fast going by and the great public with no knowledge of radio or desire to know is buying sets. This is increasing the need for service and as a service to the electrical contractor this department is started. Here will be found each month a few short hints on trouble detection, prevention and removal.—The Editor.

Greater Selectivity

Owners of 5 tube Neutrodyne sets who live in or near cities having broadcasting stations often have trouble in getting clear local reception due to the power of the nearby stations.

A New York contractor who did considerable business in this type of set reports a novel way of circumventing this difficulty.

He connects the aerial wire to one terminal of a common knife switch and runs the center pole of the switch to the aerial knob on the set.

To the other terminal he binds one end of a three foot piece of insulated wire, the other end of which he winds around the aerial wire before it reaches the opposite terminal of the switch.

In this way when the pole reaches directly to the aerial wire he can get distance, and when he wants local stations he uses the other terminal. He finds the insulated wire gives just enough resistence to make the idea feasible.

The Troublesome Lead-in

Another idea that the owner of the troublesome set will find of value, is to go over the connection between his antenna and lead-in wire.

It is often difficult to solder the end of the lead-in wire to the antenna, and a weak joint at this point means weak signals.

The contact is usually good when a new antenna wire and lead-in wire are twisted together, but exposure to the weather will soon corrode the joint. If you find it inconvenient to make a properly soldered joint at this point it is desirable to make the antenna and lead-in one piece.

Circuit Switches

One thing that absolutely spells ruin for a radio frequency amplifier is a switching arrangement which allows the number of tubes in service to be changed at will. Nothing can do more harm, and especially in a set with fixed transformers.

The use of the switch causes a bunching of the wires from the respective tubes with the result that radio signals, instead of passing through the tubes and being properly amplified by them, simply seep through the small condensers formed by the close wires. The tubes might just as well be out of their sockets for the radio current is diverted from them.

Improving the Set

One idea that the dealer would do well to get out of the average customer's head, is that of opening up a set made by a reputable manufacturer in order to "improve it."

Many a good set has been ruined simply because the owner wanted to add a "C" battery or some other similar device. If the set is working all right urge your customers to let it alone.

Battery Acid

Service men are often troubled with the set whose hook-up seems perfect and should work, but doesn't. Usually the trouble is a sizzling and crackling noise whose origin cannot be located.

In such a case it is often well to go carefully over the phone or loudspeaker cords and look for battery acid drop marks because the smallest drop will ruin them.

The acid eats its way into the fabric covering and finally weakens the cord so that it breaks. It would not be so serious if it ruined the cord at once but the trouble is that it usually causes the disturbing noises for weeks before the source of the poor reception is discovered.

Tighter Aerials

A loosely hanging lead-in or slack aerial wire will cause a "swing" in the signals whenever the wind comes up. The moving wires cause a change in the capacity of the aerial, which has the effect of detuning the set.

This is often a cause of discomfort to the radio owner who is apt to consider the finer features of the aerial of secondary importance.

The aerial wires and down lead should be drawn up tightly to prevent any movement in their position. This factor of position is so important that broadcasting stations invest heavily in equipment that will maintain the constancy of all parts of the circuit.

Battery Charging

The specific gravity reading shown by a hydrometer indicates the state of charge of your storage A battery. For instance, the gravity of a fully charged battery should be approximately 1275, while complete discharge should give a reading of 1150.

The A battery should never be permitted to give a reading below 1200 without an immediate recharge as when a battery is discharged below about 1200, lead sulphate begins to form on the battery plate, greatly impairing the action of the battery and shortening its serviceable life.

Soldering

One contractor who has had frequent complaints from amateurs regarding their soldering, has the following advice to offer:

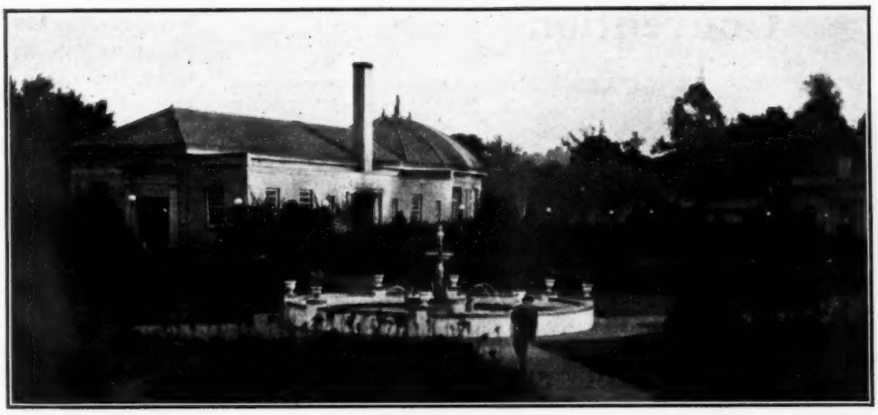
Solder containing 40 percent lead and 60 percent lead is best for radio use. The objections to wire solder having its flux in the core are that the flux may contain acid which will injure the connection, and also that it is impossible to use a little solder without getting a supply of unneeded flux with it. The excessive flux will run over the wires, making a poor looking job and causing bad electrical effects.

A. E. I. Quarter Centennial Plans Under Way

Twenty-fifth Annual Convention to be Held at West Baden, Indiana, on September 23, 24 and 25

THE old adage about all work and no play making Jack a dull boy holds good in the electrical industry as well as in any other.

But if Jack can combine playing with something that will make his work easier, give him ideas that will make his work more profitable to him, and at the same time give him more time to play, he should by all means take full advantage of it.



No. 7 Spring House and Part of the Beautiful Grounds Surrounding the Hotel

All by way of announcement that the twenty-fifth annual convention, the Quarter Centennial of the Association of Electragists, will be held on September 23, 24 and 25, at West Baden Hotel, West Baden, Indiana.

Plans are going forward now that will make this the greatest and most constructive meeting in the history of the association. Members who have any special problem to face in their particular business are urged to make a note of it and bring it up at the convention, for the real purpose of the gathering is to thrash out the electrical contractor-dealer's difficulties.

One of the important attractions of the meeting will be the Manufacturers' Exhibit. Last year forty-four manufacturers showed their products and this year a larger number is expected.

At the same time this convention is being held the Great Lakes Division, National Electric Light Association, is holding its annual meeting at French Lick Springs Hotel, which is but five minutes' ride from West Baden Springs.

West Baden affords many things that are unusual. It is one of America's favorite health resorts. Within a stone's throw of the hotel are numerous mineral springs, the waters of which are sold the world over. For those who are tired and worn out, a few days at West Baden will have a most invigorating effect.

The hotel as well affords unlimited resources for those who are athletically inclined. There are two golf courses, one extremely sporty; swimming pool, horseback riding, tennis, bowling, etc.

One golf course is laid out on the rolling Cumberland Hills that stretch from the hotel's front door. The sixth tee is on one of the highest points in the State and from it one can see far across the valley of the Ohio River to the dimly mist-covered hills of Kentucky and Tennessee.

The ladies will find much to take up their attention. A committee is now at work planning a series of amusements and diversions for them.

The hotel maintains a stable of spirited horses for those who like horseback riding and there are innumerable pleasant trips that can be arranged over the winding trails that lead from the hotel through pleasant fields and along shaded bridle paths.

For those ladies who prefer to hike through the surrounding country a series of crystal caves are found not far from the hotel.

Guides are always ready to conduct guests through them and by the aid of a lighted candle one can see color combinations that are never seen anywhere, save in a crystal cave.

The casino houses six bowling alleys, billiard and pool tables and the large swimming pool. A shooting gallery is also under the same roof for those who want to test their ability with the rifles.

The motorist will find well paved state roads leading to the hotel no matter where he comes from and many members who attended last year's convention are planning to make the trip out by auto.

The hotel garage will house over 250 cars and is completely equipped to render any kind of service the guest asks for.

All in all the plans that are now in preparation will make this one of the biggest and most constructive meetings in the history of the association.

It is the belief of the officers that much can be accomplished by the members if they will come prepared to state their troubles and by so doing assist all others at the meeting who chance to be in similar difficulties.

More Red Seal Houses

The Red Seal Plan for adequate wiring as sponsored by the Society for Electrical Development received considerable impetus last month when licenses were granted in Buffalo, Pittsburgh and Louisville for the placing of the seal. Buffalo has four houses bearing it and the other two cities one each.

It is interesting to note that the first three licenses granted have been for houses in New York State, and also that the idea is spreading as evidenced by the seal going to the southern state.

The society also reports that Rochester, the city in which the first license was granted, now has thirteen houses under construction; and that Syracuse, the second city, has ten houses.

MAY ACTIVITIES

Florida Electragists Hold Constructive Convention

Part of the Group of Florida Electragists Who Met at Jacksonville

The Jacksonville convention of the Florida Association of Electragists was held on May 19 at the Seminole Hotel with Laurence W. Davis, general manager of the A. E. I., as the principal speaker.

Mr. Davis spoke on "Overhead and Job Costs" and stressed the need of more attention to this phase of business by the average contractor.

"Uniform Inspection" was discussed by Charles E. James of Fort Pierce, and a resolution was adopted that a committee be appointed to draft a uniform inspection law for the State.

A motion was also carried that the executive committee be requested to take action towards adopting the uniform laws as advocated by the National Association.

W. E. Scott of the Westinghouse Electric Company gave an interesting talk on "Heavy Duty Appliances" and H. W. Wikle of the General Electric Company spoke on "Motor Construction."

"Time Payments and what they mean to the Contractor" was the subject of a talk by M. J. Carroll of the Commercial Investment Trust Company.

Charles E. James was appointed by the executive committee as the representative of the Florida association at the national convention which it to be held at West Baden, Indiana.

After the banquet an entertaining program was put on which included offerings from outside talent as well as from members.

The next convention will be held at Miami in November and members are looking forward to an interesting program.

Tennessee Association Wins Fight for Licensed Wiring

"An act to empower all incorporated cities, towns and villages in this state to regulate and control electricians, and electrical works, and to enforce efficiency of the same," has just been passed by the last session of the Tennessee legislature and is known as the "Enabling Act."

This takes the place of the Electrical Contractors' License Law which was passed in 1911 and declared unconstitutional by the State Supreme Court in 1923.

It comes as a result of agitation on the part of the Tennessee Electrical Contractors' Association, which last October, decided that some law should be passed that would permit not only Memphis, but any incorporated city in the state, to regulate the business of electric wiring within its corporate limits. After considerable research and consultations with many authorities it was decided that the best thing to do was ask the legislature to pass a statute that would permit the city authorities to protect the city against the haphazard wiring that was being done. The "Enabling Act" is the result.

After the Electrical License Law had been done away with, the number of irresponsible contractors in the city of Memphis rapidly increased to a point where the inspection bureau became unable to police them.

It then became necessary for the city to take measures to protect itself against the haphazard wiring that was being done and with the able assistance of W. R. Herstein of the Wesco Supply Company of Memphis, who started the movement, the "Enabling Act" was drawn up and has now become a law.

Newly Consolidated California Association Enthusiastic Group

The regular quarterly meeting of the California Electragists, the first since the merger between the Northern and Southern Divisions, was held on May 9 at Visalia, Cal., with president Victor Lemoge presiding.

It was an especially enthusiastic meeting with many contractors and dealers present who were not members of the A. E. I., but who wanted to learn more about the principles of the Association.

A report was made on the progress of the estimating school being held by the Southern Division, whose members are carrying out the plan of Arthur L. Abbott, Technical Director of the A. E. I., in taking off material and labor quantities from a standard set of plans.

Talks were given by C. J. Geisbush, executive secretary of the Southern Division, who presented 100 signed application blanks and stated that more would be forthcoming; C. L. Chamblin who spoke on the meeting of the executive committee of the A. E. I. held in New York; Victor W. Hartley, C. Felix Butte, and Walter F. Price, executive Secretary, who spoke on the Red Seal Plan.

Plans were made for the annual convention of the Northern Division to be held at Eureka, August 3-8.

The Humboldt County members and the Eureka Chamber of Commerce have an elaborate program in store that promises much for those who attend.

As many members are planning to

drive to the event it has been agreed that all autoists will meet about 75 miles outside of Eureka, where the Humboldt members will put on a clam bake, etc. The next morning the group will drive into Eureka in a caravan where they will be received by the chamber of commerce members.

One day has been planned to see the electric logging mills near Eureka where the entire delegation will be treated to a "lumber-jack" feed.

Contractors' Association Formed in Atlanta

Another cooperative move in the electrical contractor field was started on April 6 when the Atlanta Electrical Contractors' Association was organized.

Pat Hendricks, of the Hendricks Electric Company, was elected president, and the vice-president elected was E. C. Parker. B. K. Laney of the Bailey-Oliver Electric Company was elected secretary-treasurer.

These three officers comprise the executive committee with J. E. Mellett, of the J. M. Clayton Company; Gadsden Russell of the Russell Electric Company; and Sam Donelson and Carroll McGaughey of the McGaughey Electric Company.

Executive Committee to Meet in Chicago

The extra meeting of the executive committee of the Association of Electragists, International, called for in the minutes of the committee's last meeting will be held this month in the beautiful new quarters of the Electric Club of Chicago, June 22 and 23.

The sessions, in accordance with the new proceedure, will be executive in character.

April Meeting Rhode Island Electrical League

More than 100 men were present at the April meeting of the Rhode Island Electrical League, held at the Shrine Club, Providence, April 26, and listened to a talk by Harry E. Dawson, secretary of the League, in which he said that a thorough investigation was under way to determine just how the Standard Accounting System could best be introduced in Rhode Island.

He also called attention to the fact that special medals had been awarded to six Rhode Island school pupils who had taken part in the lighting contests.

$20,000 Raised in Pittsburgh for Red Seal Campaign

The Electric League of Pittsburgh recently held a meeting at the Fort Pitt Hotel at which $20,000 was raised by subscription to follow up the Better Home Lighting Campaign, and introduce and foster the Red Seal in Pittsburgh.

Over 200 men affiliated with the industry were present and listened to an address by Mr. Kenneth McIntyre of the Society for Electrical Development in which he outlined the Red Seal Plan. Various members in different branches of the industry also spoke in its behalf.

Forty-four contractors and contractor-dealer firms were represented at the meeting which was one of the largest groups of this branch of the industry the league has ever had present.

J. H. Van Aernam was appointed manager of the League and is in charge of the Red Seal Campaign.

Electrical League of Peoria to Build Electrical Home

On Thursday evening, April 23, forty-five contractors and contractor-dealers, in the electrical industry in Peoria, Ill., met in the city hall and formed the Electrical League of Peoria.

Tentative plans were started for the erection of an electrical home to be ready for inspection sometime in the early fall.

Kenneth A. McIntyre of New York, representing the Society for Electrical Development, spoke on the results that may be expected following this cooperative move.

J. C. Schaefer, a member of the A. E. I., was elected secretary and treasurer of the League, and C. O. Durkin and J. R. Downs, also A. E. I. members, were elected to the chairmanship of the finance and building committee, and the wiring and fixture committee, respectively.

Denver League Against Use of Inferior Material

At a meeting of the Denver Co-operative League on May 11 the advisory board discussed the problem of utility taps and improvised convenience outlets, that were not approved by the Underwriters or the local inspection department, and were for sale in various parts of the city.

The board definitely opposed the use of such attachments and it was decided that while the matter was not one for legal correction, it was believed that the cooperation of various manufacturers and jobbers interested in such merchandise could be secured and the material kept off the local market.

At a meeting of the board a week previous the idea of formulating a set of specifications for house wiring was approved and a committee appointed to take charge of the matter.

Iowa Electragists Hold State Convention

The state convention of the Iowa Association of Electragists was held on Monday, April 27, at Marshalltown, Ia.

Earl N. Peak, chairman of the convention committee called the meeting to order and an address of welcome was made by Glen Eastburn, secretary of the Marshalltown chamber of commerce.

Laurence Davis, secretary of the A. E. I. spoke to the gathering on "Progress" following the message of president R. Honegger. A. E. Peterson, field representative of the A. E. I. was also present and spoke.

Joe Carmichial, director of the Iowa Committee on Public Utility Information, addressed the gathering on "Winning Good Will," and in the afternoon reports were read from the various committee chairmen.

The convention wound up with a banquet at the Elmwood Country Club.

Georgia Electrical Association Convention

The sixth annual convention of the Georgia Electrical Association was held on May 21 and 22 in Atlanta with 80 in attendance.

Laurence W. Davis, general manager of the A. E. I., made an interesting talk on "Contractor-Dealer Accounting," after the Thursday morning session was formally opened by J. E. Mellett, president of the association. The subject of accounting and estimating was also taken up and enthusiastically discussed.

"The increasing attention that is being directed towards the plan adopted by the contractors of New York City for selling time and material work at cost plus a profit—'cost' being actual invoice prices on materials and a fixed selling price for labor to cover wage rates plus the contractors' overhead—brings out the need," Mr. Davis stated, " for emphasizing a careful study of the question by other cities in working towards a similar plan."

"In New York City," said Mr. Davis, "the contractors have adopted a mark up of 43 percent on their wage rates as sufficient to cover their total contracting overhead. Whether such a fixed percentage to cover the overhead of all contractors in New York on all classes of contracting work and all sizes of jobs will work out satisfactorily only experience will determine.

"It should be remembered, however, by other cities that if 43 percent is the right markup on labor in New York City on a wage rate of $1.31¼ per hour for journeymen to cover average overhead costs there, and if the average costs of conducting similar contracting businesses in other communities were the same as in New York City, that the percentage of markup on labor only to cover such overhead will vary in each city in proportion to the wage rates in force there.

"For example, if 43 percent is correct on a wage rate of $1.31¼ in New York City, then the percentage of markup to cover the same overhead in Grand Rapids, Michigan, where the wage rate for journeymen is $.80 would have to be 70.5 percent.

"Each contractor should study the relation of the total hours of labor represented by his volume of work to his total overhead cost of doing business and determine the markup on these hours needed to cover his overhead, and not jump at a conclusion that a percentage fixed as an average in another city will cover his conditions."

On Friday morning an address was made by J. E. Jaquet of the Society for Electrical Development, and Milton W. Bell, vice president of the Atlanta chamber of commerce, also spoke.

P. C. Gilham, president of the Gilham-Schoen Electric Company, was the featured speaker after the banquet in the evening and chose as his subject, "Jobber-Contractor-Dealer Cooperation."

The meeting was arranged by L. W. Roberts, Jr., chairman of the executive committee.

N. E. L. A. Convention at San Francisco

The forty-eighth convention of the National Electric Light Association will be held this month from the fifteenth to the nineteenth at San Francisco. As in the past the five days will be taken up with the committee reports.

New Uniform Proposal Form

A new uniform proposal form has been prepared by the Association of Electragists to replace the form in use up to this time. The new form, here shown, is letter head size and is much simpler, yet more complete. It states all requirements of the job and is arranged for greater clarity and fullness of proposal.

On the other side of the sheet are the following conditions of contract:

"All workmanship and materials are to comply with the requirements of the National Electrical Code and the City Ordinances governing this class of work.

"Lighting fixtures and lamps are not included in this proposal.

"Additional work may be ordered by the customer at any time before the work is started, at the unit prices named in the schedule. Any other change from the work as herein described involving additional cost of labor or material is to be paid for by the customer in addition to the contract price named herein, at the price agreed upon or at our regular rates for time and material work. No changes will be made and no additional work will be installed except upon the written order of the customer.

"If the customer disposes of the real estate by sale or otherwise, the full amount remaining unpaid on this contract becomes due at once and payable within 48 hours after date of such disposal.

"It is hereby mutually agreed that the contractor shall not be held responsible or liable for any loss, damage or delay caused by fire, strikes, civil or military authority, or by insurrection or riot, or by any other cause beyond his control."

Form 18
Association of Electragists

UNIFORM PROPOSAL

From ..... Electrical Contractor

To ..... Proposal No. .....

..... Date .....

We hereby propose to furnish all labor and material necessary to install Electric Wiring in the .....

..... located at .....

in accordance with the following specifications, and subject to the conditions stated on the reverse side of this sheet.

SCHEDULE OF OUTLETS AND BELL WORK

LOCATION	Ceiling Light Outlets	Bracket Light Outlets	Convenience Outlets Single	Convenience Outlets Duplex	Floor Outlets	Heater Outlets	Range Outlet	S. P. Switches	3-Way Switches	4-Way Switches	Bell Work	
Unit Price for Additions												

Branch Circuit Wiring is to be { Armored Cable / Rigid Steel Conduit / Flexible Steel Conduit / Knob and Tube } work, except exposed work in the basement, which is to be .....

..... Service wires are to be installed in rigid steel conduit. The service switch and meter loop are to be located in ..... Wall switches are to be the ..... type, and receptacles the ..... type.

The customer has the privilege of cancelling this contract at any time before the work is started, upon payment of 10% of the price stated below.

This proposal is void if not accepted in writing within ..... days after this date.

The price for the work described above will be ..... Dollars ($ .....) payable on the following terms:

.....

.....

.....

Accepted by ..... Customer

Date .....

By ..... Electrical Contractor

Thomas A. Edison Honored by Pioneers at Menlo Park

A bronze commemorative tablet marking the spot where Thomas A. Edison began his experiments and where nearly all his early inventions were conceived and perfected, was unveiled on May 16 in Menlo Park, New Jersey, in honor of the electrical genius.

The tablet bears this inscription, "On this site 1876-1882 Thomas Alva Edison began his work of service for the world to illumine the path of progress and lighten labor for mankind. This tablet is placed by the Edison Pioneers to attest the gratitude of the industries he did so much to create."

Mrs. Edison had the honor of unveiling the tablet in the presence of about 600 of Mr. Edison's early associates and friends, including, Governor Silzer of New Jersey and President Hibben of Princeton, both of whom spoke.

At Menlo Park on October 21, 1879, Mr. Edison first became convinced that his incandescent lamp would work which indirectly led to the central station system of power distribution.

Edwin W. Rice, Jr., chairman of the board of the General Electric Company spoke of his early skepticisms towards the lamp and mentioned the exaggerated and misleading statements regarding it that were published in the newspapers at that time.

He also commented on Mr. Edison's inventions of the duplex telegraph system, the stock ticker, and the part he played in putting into commercial shape the "Remington" typewriter.

The Tablet is placed close to the Lincoln Highway

Formal presentation of the tablet to the state was made by John W. Lieb, vice president of the New York Edison Company and first electrician of the original power generating station built by Mr. Edison in New York in 1882.

Charles L. Clarke, president of the Edison Pioneers made the address of welcome and spoke of his early associations with the inventor.

Samuel Insull, president of the Commonwealth Edison Company of Chicago and Mr. Edison's first private secretary also spoke.

How to Charge Freight and Cartage

"In reading the data on costs of doing business illustrations were given of certain businesses. I note that many times as an item of expense freight as well as cartage was included. I have always charged freight to merchandise, figuring it as a part of cost of goods. Which is the correct procedure?"

ANS. The best accepted practice is to adjust all freight and cartage up to delivery in the warehouse as a part of the cost of goods purchased. This practice is recommended as it results in a uniform basis of cost on all materials whether it is shipped express prepaid by the distributor, in which case of course shipping cost is absorbed in the price charged to the dealer, or shipped express collect and the charges paid when the goods are received. Your methods of figuring it as a part of the cost of goods is therefore correct.

However, many businesses charge incoming freight and cartage into general overhead preferring to do this rather than adjust the cost of freight and cartage proportionately among the several items of various shipments that may be received on one shipping bill. For this reason, we are obliged to include an item in our questionaires covering overhead cost of business to show this figure of incoming freight and cartage where it is so included in overhead.

In the ultimate results it is not essential whether an expense item is charged directly against a particular commodity or job, or whether it is included in the general overhead so long as the method adopted assures that the business is paid for that charge.

However, your system of proportioning freight to merchandise is the best method as it shows the true cost of all merchandise received in your store whether it is shipped express collect or sent express prepaid and the shipping charge absorbed by the original price placed upon the goods by the distributor.

Addresses Jobbers

President Joseph A. Fowler of the Association of Electragists will address the Electrical Supply Jobbers Association at Hot Springs, Va., June 4, on "Contractor-Dealer Problems." The week previous he spoke before the Westinghouse Agent Jobbers' Association at the same place.

Joint Convention Planned by Lighting Associations

From June 17 to 19 a joint convention will be held by the four national associations of the lighting industry, viz: the National Council Lighting Fixture Manufacturers, National Association of Lighting Equipment Dealers, the Illuminating Glassware Guild and the Associated Lighting Equipment Salesmen, at the Ambassador Hotel, Atlantic City, New Jersey.

Each association will hold separate meetings to discuss its own problems and a joint meeting will be held of all four bodies to consider broader questions. H. I. Sackett, of the H. I. Sackett Electric Company of Buffalo, N. Y., and chairman of the National Association of Lighting Equipment Dealers, will deliver the opening address to his group on June 17, after which a general discussion will be held. "Dealer's Problems" will be the topic for the morning session of the following day with Charles L. Scott of the Detroit Mantel & Tile Company in the chair.

The National Council of Lighting Fixture Manufacturers opens its meeting with an address by Charles H. Hofrichter on "Industry Coalition." A discussion of "Ways of Increasing the Sales of Lighting Equipment" follows.

The programs of the other two groups have not been fully announced.

Various sports have been arranged including a golf tournament for the Biddle Cup, given by Robert Biddle, former president of the national council, and a swimming contest in the indoor pool.

Manual of Accounting

A manual on accounting practice for the electrical contractor-dealer has been prepared by the Association of Electragists and is now on the press. The manual includes the departmentalizing of the business into contracting and merchandising with provision for the proper allocation of overhead.

There are also five new forms to be used in conjunction with the Standard Accounting System, namely:

Cumulative statement of overhead ratios.

Profit and loss statement by departments.

Allocation of overhead to departments.

Payroll statement.

Labor summary.

The industry has needed a method of allocating overhead for years and this manual, it is expected, will show definitely whether or not the separate departments are being run profitably or not.

Red Seal Plan Finds Favor in Middle West

Kenneth A. McIntyre of the Society for Electrical Development of New York has just returned from an extended trip through the middle west where he spoke to numerous gatherings of electrical men on the Red Seal Plan. He reports great interest in it and a desire on the part of many organizations to learn more about the project.

His itinerary included Buffalo, N. Y., where he spoke before the directors of the Buffalo Electric Show and the General Committee of the Electric League of the Niagara Frontier, Pittsburgh, Pa., Decatur and Peoria, Ill., Milwaukee and La Crosse, Wis., where a committee was organized to form the Electric League of La Crosse.

Also he addressed the Electric League of Minneapolis and the Electric Club of Duluth and spoke in Toronto, Ont.

Harrisburg Contractors Favor Quality Work

The Harrisburg Electrical Association held a meeting on April 20 at the Penn-Harris Hotel and the subject, "The Electrical Contractor from the Public's Viewpoint," was discussed.

The association went on record as strongly favoring the combination of first class work and moderate charges both as a matter of principle and to cement the good will of the public.

I HAVE FOUND

That if the contractor will take advantage of every discount for cash notice that appears at the top of a manufacturer's bill, he can save an amount of money that will surprise him.

Out of curiosity I decided to try it and found that last year I saved enough to pay four months rent on the store.

Albert A. A. Tuna
TUNA ELECTRICAL COMPANY
127 East 34th Street
New York

Uniform Electrical Ordinance

The law committee of the Electrical Manufacturers' Council in cooperation with a special committee of the Association of Electragists has revised the Uniform Electrical Ordinance to meet the practical requirements of the electrical contractor.

The revised form is now on the press and will be ready for distribution shortly.

What a Guarantee May Cover

The owner of an old loft building offered an electrical contractor the job of putting in a completely new electrical wiring installation, but in the contract stipulated that the contractor guarantee for a period of one year after the job had been finished that the workmanship and material would do the work for which it was intended. The contractor saw nothing unusual in the stipulation and inasmuch as he used the best material only and observed all the Underwriters' rules he did not hesitate to accept it. Nine months after the job was finished a floor in the building sagged and pulled the conduit apart so that the installation was unsafe. The owner immediately called upon the electrical contractor to fix the wiring under his guarantee. The contractor protested, saying that the fault had not occurred in the workmanship or material of the electrical job but in the building, for which he was not at all responsible. However the owner persuaded him to do the work under the guarantee by having his lawyer show him a decision in a Montana court on a similar point. The decision was:

"The provision in a contract to construct a trestle work * * * providing that the contractors 'hereby guarantee the workmanship and material * * * in this structure to do the work for which the structure was intended * * * for a period of five years from date' is construed to be a guaranty of the sufficiency of the structure when completed, and not limited merely to a warranty of workmanship and material."

Substantial Performance of Contract

An electrical contractor was given the job of wiring several houses which were being constructed by a speculative builder. The plans for the wiring layout had been made by another contractor and included the roughing in of pipe for a future electric range or heater installation. Through an oversight, though everything else on the plans was carried out, this was not done and the speculative builder announced that he was going to withhold payment of the bill and sue for a considerable amount of damages, claiming that the failure to rough in the pipe would hurt the sale of the houses. However, his lawyer advised him to settle with the contractor for a much smaller amount, being guided by a decision on a like case in the State of Washington, which declared that:

"Where a contractor has substantially complied with his contract, the measure of damages to the owner would be what it would cost to complete the structure as contemplated by the contract; there being a 'substantial performance' of the contract where the variations from the specifications are inadvertent and relatively unimportant and may be remedied at small cost and without material change of the building." White v. Mitchell, 213 p. 10.

Conference Committee Formed

The New York State Association of Electrical Contractors and Dealers announces in a recent bulletin that the "Joint Conference Committee" is now functioning and is made up of members from the power companies, the Underwriters and the association.

The purpose of the committee is to confer on power company and Underwriter rulings with a view to securing uniform interpretation throughout the state. Should a member of the association have any difficulty in regard to the rulings of these agencies he is to report them to the secretary or chairman who will place them before the committee in an effort to arrive at a satisfactory conclusion.

New York Contractors Visit Lighting Institute

On Wednesday evening, May 13, the Independent-Associated Electrical Contractor-Dealers of New York City met at the Edison Lighting Institute, Harrison, N. J., for a buffet supper and trip through the plant.

President L. C. MacNutt headed the fifty men present and after the eatables were consumed an address was made by A. F. Loewe, director in charge, on "The Purpose of the Institute." He told the men that the Institute was established for their use and that the aim of the Edison Company was to present the newest discoveries and improvements in the electric lighting field.

The smallest electric light in the world was on view. It's capacity was 1/32 of a watt and it presented a striking contrast to the largest electric light in the world that was mounted on a panel just above it and consumed 33,000 watts.

The group was then taken to the industrial lighting room where all types of industrial units were shown and their various advantages displayed. D. J. Finn, the Institute's lighting expert spoke on "Industrial Lighting" and the men were shown the various advantages of having the correct lighting in plants and factories.

The model store was also on display and after a short talk on window lighting the meeting adjourned.

"June Bride Campaign"

The "June Bride," "Give Her an Electrical Gift," campaign sponsored by the S. E. D. and announced in the May issue of THE ELECTRAGIST has met a ready response from dealers, according to officers of the Society. Dealers desirous of building up the gift and appliance end of their business should get in touch with the campaign managers if they have not already done so.

Minimum Requirements No Guarantee of Satisfactory Job

A most interesting comment on Code or minimum requirements—interesting because of its source and therefore because of its value to electrical contractors generally—has been made an official part of the new book of installation rules for the city of Oakland, Cal. These rules, effective January 12, 1925, are presented by the local electrical department with a "Special Notice" which points out very emphatically that the ordinance contains only minimum requirements which are not to be taken as leveling quality. The special notice follows:

It should be clearly understood that these rules and regulations do not constitute complete specifications for electrical work or installations. They simply prescribe and establish a reasonable minimum standard of safety. Inspections are made only for the purpose and to the extent of determining that the minimum requirements have been met. Specifications for electrical installations are not complete when they simply require compliance with municipal or other regulations.

The suitability, operating efficiency, convenience, finish, appearance, and value of an electrical installation may be varied or affected in many respects without departure from any prescribed regulation.

Numerous details which may so affect the design or quality of an installation cannot properly be included in the requirements of any safety regulations. All of the methods, materials, devices, etc., which are approved for a given purpose are not of equal merit or value. Approval simply means that they meet the prescribed minimum standards.

Hence, in a case where there are no detailed electrical plans or specifications upon which all bids are based alike, and two or more proposals are submitted, the mere fact that the work covered by either or all of the proposals will comply with the regulations and pass inspection gives no assurance that the proposed installations are of equivalent value or that they will afford an equal degree of satisfaction to the owner or user.

To be sure of obtaining an installation that will fully meet his individual needs and requirements, the owner should have the work installed by trustworthy and responsible parties who are properly qualified to handle the particular work which they undertake. A certificate of inspection should invariably be required upon completion of the work.

It is urgently recommended that future extensions or increases of load be anticipated when possible, and that provision be made for them in the initial installation, particularly in the installation of services, main feeders, and distributing centers.

A Window Full of Cooperation

THE Galveston Electric Company, the central station company of Galveston, Tex., recently showed its desire to cooperate with local contractor-dealers by making the window display shown above. The display brings out in an interesting way the service that contractors are prepared to render the public and urges Galveston builders to patronize the electrical contractors of their home town. On the large placard is a list of local contractors.

New Service Instituted by S. E. D.

The Society for Electrical Development has instituted a monthly merchandising and advertising service commencing June 1, to assist contractors and others retailing electrical appliances in increasing their business.

It is made up in loose leaf form and the mats and stereos for the illustrations are available at cost. Each monthly service will be completed in a standard package and members may subscribe to the complete service at a nominal cost per year.

Contractor-Dealers' Outing

The summer outing season is rapidly getting under way and the first affair to be announced in the New York district is the annual outing of the Independent Associated Electrical Contractor Dealers of Greater New York, to be given at Oakwood Arms, Staten Island, on July 11th.

L. C. MacNutt, president of the association wants it understood that ladies are very welcome. After the dinner there will be the usual baseball game, athletic events, dancing and door prizes, etc.

Home Lighting Primers Free

The Lighting Educational Committee is distributing its surplus stock of Home Lighting Primers, free of charge. They contain the latest information on better home lighting and can be distributed to the public, especially in districts where only a portion of the people received them through their children.

Companies or persons desiring them should communicate directly with The Lighting Educational Committee, 680 Fifth Ave., New York City. All orders will be sent express collect.

New Electragists

Since the publication of the last addition to the membership section of the A. E. I Data Book in the May issue, the following contractor-dealers had made application for membership and had been accepted up to May 22:

CALIFORNIA

Anaheim:
Anaheim Elec. Co.
Holland Elec. Co.

Bakersfield:
Jim Baker.
Bakersfield Elec. Co.

Baldwin Park:
L. L. Root.

Brea:
Brea Elec. Co.

Beverly Hills:
L. A. Baker Elec. Co.
Beverly Hills Elec. Contr. Co.
G. & L. Electric.
Paul H. Needham.
Wilshire Beverly Elec. Co.

Burbank:
Kendig Bros. Elec. Shop.
G. E. Peterson Elec. Shop.
Howard L. Stolper.

Burlingame:
Mausser Elec. Shop.

Compton:
Compton Elec. Co.
Model Elec. Co.
Stiers Elec. Co.

Covina:
Winder & Jones.

Fresno:
H. J. Wessel.

Glendale:
C. L. Brenkman.
Machtolff-Doll Elec. Co.
The Maxwell Elec. Shop.
J. A. Newton Elec. Co.
Smith Elec. Co.
Verdugo Elec. Co.

Hollywood:
Doran's Elec. Shop.

Huntington Beach:
Huntington Beach Elec. Co.
R. E. McIntosh.

Kingsburg:
D. E. Ericson.

La Verne:
La Verne Elec. Co.

Los Angeles:
Barker & Allen Elec'l Const.
Curtis Hwd. & Elec. Co.
F. E. Elser Elec'l Co.
C. R. Evans.
Foulkes Elec. Co.
Franklin Elec. Shop.
Gans Bros., Inc.
Hensel Elec. Store.
Hill Elec. Co.
Chas. A. Holland Elec. Co.
Quality Elec. Works.
J. C. Rendler.
H. W. Scott.
Sierra Elec. Const. Co.
F. D. Stevenson.
H. G. Stone.
A. S. Tyler.

Lynwood:
Lynwood Elec. Co.

Ontario:
Davis Elec. Co.
Granger-Dacus Elec. Co.

Orange:
C. B. Harper Elec. Co.
Orange Elec. Co.

Owensmouth:
Benson Radio & Elec. Shop,
John Bradfield.

Pasadena:
Acme Electric Co.
Barnes Brothers.
The R. H. McCormick Elec. Shop.
The McNally Co.
J. B. Morgan.
T. E. Webb.

Pomona:
Hall & Son.
Harrison-Fitch Elec. Co.
Pomona Fixture & Wiring Co.

Reseda:
Reseda Elec. Shop.

San Diego:
California Elec. Works.
C. C. Clardy.
E. R. Damarus, Elec. Contr.
Funchess & Karl.
Independent Elec. Co.
Phillip Mayer & Co.
Smith & Dodge.
J. F. Zwiener.

San Fernando:
Valley Elec. Works.

San Mateo:
J. A. Foster.

San Pedro:
Journey & Stone.
Pierson & Boren.
San Pedro Elec. Co.

Seal Beach:
Keim Electric.

Santa Ana:
Cope Elec. Co.
Gem Electric Co.
Robertson Elec. Co.

Van Nuys:
Marsden Radio & Elec. Co.
Standard Elec. of Van Nuys.
Van the Electric Man.

Willowbrook:
H. A. Paschall.

Wilmington:
Harbor Elec'l Co.

Yreka:
Elec. Supply Co.

FLORIDA

Longwood:
Elec. Shop of Winter Pk.

Miami:
Simplex Wire & Cable Co.

ILLINOIS

Belleville:
Friedman Elec. Co.

Edwardsville:
Fink Elec. Supply Co.

Macomb:
Maguire & Horine.

IOWA

Des Moines:
Superior Fixture Co.

Sioux City:
The Harper-Abbett Elec. Co.
Nystrom-Olson Co.

MASSACHUSETTS

Leominster:
Gettins Electric Co.

Northampton:
Surriner & McBreen.

MISSOURI

Columbia:
Weathers Elec. Co.

St. Louis:
Le Roy Upton.

NEW HAMPSHIRE

Concord:
Service Elec. Co.

NEW YORK

Rochester:
Ernest L. Farnsworth.
Richard W. Kohlmeier.
L. Rockwood.

OHIO

Youngstown:
The Standard Chandelier Co.

PENNSYLVANIA

Erie:
Hills Electrical Co.

SOUTH DAKOTA

Aberdeen:
Aberdeen Line Constr. Co.
Aberdeen Engineering Co.
O'Rear Elec. Co.
Star Elec. Co.

Madison:
Palmer Elec. Co.

Mitchell:
Fowler Electric Co.
Weidenbach Elec. Co.

Redfield:
Elec. Service Co.
Redfield Elec. Shop.

Sioux Falls:
Electric Supply Co.
Electric Constr. Co.
Tri-State Elec. Co.

Watertown:
S. H. Addison.
Elec. Service Co.

TENNESSEE

Knoxville:
Scott Hale Elec. Shop.

News Notes Concerning Electrical Contractor-Dealers

L. V. Goodbread of Hollywood, Fla., is opening a new store on Cleveland Street.

The Bauknight Bros. Electric Shop located on Lee Street, Greenville, Texas, has been purchased by James Smith.

A. E. Ford and Leo Smart have purchased the Wheat Electric Company of Santa Maria, California.

A. C. Wagner and Leo L. Wagner of San Jose, California, have opened an electrical shop on South Second Street.

Albert Lamothe and C. E. Noble have opened an electrical business at 65 Grove Street, Meriden, Conn.

The Fairbault Electric Company of Fairbault, Minn., has moved to a new store at 213 Central Avenue.

Edward A. Moore, Edward R. Locke, Harry Larsen and George A. Linville, former employes of the J. R. Allen Electric Company of Los Angeles, have formed a partnership and taken over the business of that firm and have changed the name to United Electric Company.

Diefenderfer & Willenbecher, electrical contractors and dealers, of 136 N. Ninth Street, Allentown, Pa., are moving to new quarters at 41 N. Tenth Street.

R. D. Ford and C. F. Winkle have opened an electrical supply store at 95 Main Street, Ansonia, Conn.

Walter F. Bergner, formerly with the Lawrence Battery Shop of Lawrence, Mass., has opened an electrical business of his own at 242 Broadway, Lawrence.

The M. H. Johnson Electric Corp., of 80 Genesee Street, Utica, N. Y., has opened a new store at 100 Genesee St.

W. H. and K. W. Kutil, have opened an electrical shop at 851 Second Street, Huron, S. D., to be known as the General Auto Electric Company.

Renan C. Baum has opened an electrical shop on East Front Street, Oil City, Pa.

Frank G. Adams, 23 Elijah Street, Woburn, Mass., has just started the electrical installation in the three new fire proof buildings of the Woburn Degreasing Company. It is a conduit job throughout.

Fred C. Bragg, president of the Electric Construction Company of Little Rock, Ark., has just purchased the Rialto Theatre building in that city, which he plans to turn into a permanent home for his electrical business.

The Washtenaw Electric Shop of 200 East Washington Street, Ann Arbor, Mich., has been purchased by F. C. Siddall and Harry J. Richards, former employes, from C. M. Wardwell.

The Electric Shop of Pierre, South Dakota, has moved to a new location in the Fitch Block.

An announcement is made of the removal of the Tibbott Electric Company of Lima, Ohio, from 128 N. Elizabeth Street, to the Herbst Building at 117 N. Elizabeth Street.

Charles Van Horn has sold his electrical store at Ithaca, Mich., to H. D. and J. F. Matthiesen.

A new store has been opened in Magnolia Park, Cal., by H. L. Stolper, electrical contractor.

The Miami Electric Co., Peru, Ind., has moved to new and larger quarters.

M. M. Chapman has established an electrical business at Fort Myers, Fla.

A new electrical firm, the Lewis Electrical Company, has opened a store at 123 South College Avenue, Bloomington, Ind.

Stuart C. and Philip E. Irby, of Jackson, Miss., have organized the Stuart C. Irby Company to handle electrical supplies at retail. The former was until recently a member of the firm of the Campbell-Irby Company, electrical jobbers, and the latter has been associated for some time with E. W. Cook, in the Cook-Irby Electrical Company. This business will be continued under the title of E. W. Cook Company.

Offices have been opened at 515 North Park Street, Columbus, O., by the Superior Electric Engineering Company.

The Electric Shop, owned and operated by Frank Olmsted, has been opened at Longview, Wash.

A retail electrical store has been established at 232 West Cortland Street, Jackson, Mich., by the Crandell Electric and Supply Company.

William E. Hughes has become the sole owner of the Johnstown (N. Y.) Accessory & Electric Shop through the purchase of the interest of his former partner, Ivan H. Staley.

Monongahela, Pa., has a new electric shop, operated by Lee Wallace.

New quarters have been purchased by the Universal Electric Service Company, Shelbyville, Ind.

The Alexis New Electric Shop has been opened at Alexis, Ill.

C. H. Weigand has established an electrical store at 321 Court Street, Hamilton, O.

The Service Electric Company has been established at 127 West Third Street, Alton, Ill., by Earl Linkoyle and Oliver Wells.

A branch store has been opened at Prattsburgh, N. Y., by H. C. Smith & Brothers, electrical contractors, Hornell, N. Y.

•MANUFACTURING•

A Department Devoted to the Latest Devices Used by the Electrical Contractor and Dealer

All-Porcelain Receptacles

Pass & Seymour, Inc., Syracuse, N. Y., are placing on the market a new and complete line of all-porcelain receptacles which includes three groups, receptacles for 3¼ and 4 in. boxes; 3¼ in. box receptacles and deep recessed back receptacles for the unusual situation. In each group are the chain and cord type for ceiling lights; insulated chain type for side wall lights and the keyless type for wall switch control.

The porcelain shade holders and rings are threaded to turn on the heavy metal lamp shell which extends through the porcelain cover, making a compact unit. The shade holder feature eliminates the usual cover screws and makes the cover surface perfectly smooth. The neck of the glassware seats firmly in the porcelain holder and becomes a part of the unit. The ring is designed especially for ball lamps and the new ball lamp shades.

Omitting the shade does not mar the finished appearance of the receptacles, the manufacturer states.

Radiola Portables

The Radio Corporation of America announces two new Radiola Portable Super-heterodynes, Nos. 24 and 26.

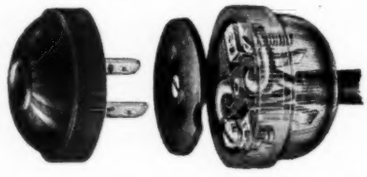
The chief difference in the sets is in the design of the cabinets. Radiola 24 is exclusively portable and is in a black leather suitcase. The loop is the demountable rotating type and is carried on inside of cover.

Radiola 26, shown here, is enclosed in a grain walnut cabinet and has a loop mounted within the frame of front door and part of the front cover.

Each set employs six UV-199 tubes. Ample space is provided for batteries. Each set requires, for portable use, three A batteries, four 22 1/2 volt intermediate type "B" batteries, and a standard 4 1/2 volt grid battery.

Cord Connector

A new cord connector is being manufactured by the Beaver Machine & Tool Co., Inc., that includes only two pieces of molded insulation, including the standard attachment plug cap.



The view shown in skeleton is the female half to which the manufacturer calls special attention, pointing out the strain relief features, the double or laminated phosphor bronze contacts, and claiming that it is easier to wire up than the older barrel shaped types.

General Purpose Motors

The General Electric Company is now manufacturing a completely revised line of general purpose motors following the marketing of a new type of direct current motor and a redesigned type of alternating current motor.

Washer

The Gainaday Electric Company, Pittsburgh, is now marketing its new washer. The tub is all one piece, pressed from 33 oz. copper, nickel-trimmed inside. As it rotates from left to right with an easy and regular motion the three baffles create a violent water action. The capacity of the tub is 10 lbs. of dry clothes. The mechanism which is suspended from a pressed steel chassis is simple in construction and has few parts. The main mechanism consists of

only 5 parts—worm, worm-wheel and 3 small spur gears. Timken roller bearings are mounted on each end of worm shaft. The chassis is mounted on 3 pressed steel legs, spot-welded. The outer cabinet can be removed by loosening 4 screws.

Wringer is die cast aluminum, swinging type, left or right handed, equipped with balloon type rolls and quick-acting safety release.

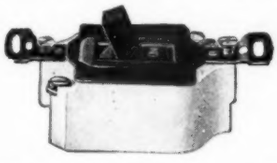
Washer dissembles into 3 units, which one man can deliver and set up.

Canopy Switch

The Circle F Manufacturing Company of Trenton, N. J., has recently brought out a new canopy switch for use with shallow spun or cast canopies. It is fitted with six inches of No. 18 B. & S. stranded rubber covered fixture wire, extending from the sides.

Brush brass is the standard finish on exposed parts. These switches can be put in position without removing the cap or knob.

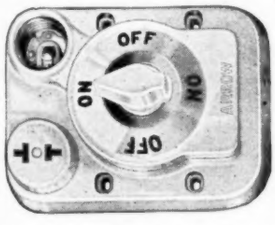
A new shallow type switch has been brought out by the same company.



One feature is that the mechanism is fastened to switch base which serves as an insulator, making it impossible to make a ground on the wall box. The base is 1 in. deep and 2¼ in. long.

Surface Switch

A surface switch current tap and pilot light has just been introduced on the market by the Arrow Electric Company of Hartford, Conn.



The cover is made entirely of porcelain with the indicating letters etched in and baked on, so that the device is not only suitable for damp places but can also be kept clean. The switch, No. 466, has a reciprocating movement.

Silver Plating Compound

A new silver plating and polishing compound is being put out by William Crell, 38 Fillmore Ave., Corona, N. Y., under the name of Lightning Silver Plating Compound.

The manufacturer states that it will quickly plate canopies, screws, pull chains, socket shells, etc., and that the silver in the solution is held in such a way that when it is brought in contact with brass, copper or any of its alloys, there is deposited on the metal a thin sheet of chemically pure silver.

Lighting Unit

The Beardslee Chandelier Mfg. Co., of Chicago has just brought out a new lighting unit, Design No. E24-479, in which the glass bowl, shaped like an inverted mushroom, extends above the metal ring so that a portion of the light is diffused upward.

The unit is recommended for use in fine stores, offices, hotels, theatres and other locations calling for a decorative fixture. The view shown is from the under side.

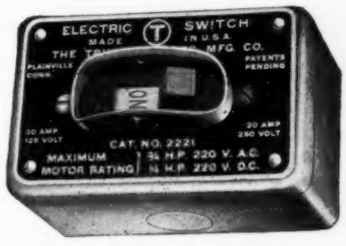
Overload Circuit Breaker

The manufacture of a non-closable on overload circuit breaker by the Roller-Smith Company, 233 Broadway, New York, is announced in the supplement to their bulletin No. 530.

It is a free handle breaker that cannot be closed or held closed on an overload even though the operator's hand is on the handle. It can be supplied in from 5 to 3000-amp. capacity, single pole, two pole independent arm, and two, three, and four pole rigid arm.

Tumbler Switch

A new tumbler switch of rugged construction for use with fractional horse power motors is being manufactured by the Trumbull Electric Company of Plainville, Conn.



The size of the box is 2 5/8 by 4 by 1 13/16 inches and has a special galvanized finish. The handle is protected by a heavy steel guard and holes are provided for locking in an "on" or "off" position with padlock or seal.

The manufacturers claim ample room is provided for wiring. An indicating dial is part of the equipment.

Condensed Notes of Interest to the Trade

The X-Ray Reflector Company of New York has changed its name to Curtis Lighting of New York, Inc.

The Benmore Electric Company of Lorain, Ohio, has moved to a new home at 929 Broadway.

Standard Electric & Heating Company, 111 West Eighth Street, Michigan City, Ind., has changed its name to the Hobart Electric Company, and has moved to new quarters at 321 Franklin Street.

The Reiner Electric Company, 2217 Woodward Ave., Detroit, announces the removal of its general office to 510 Scherer Building. The company has also opened a new service store to be known as The Coffield Shop, East Grand River at Farmer Street, Detroit.

Announcement is made of the removal of the Electric Service Shop of Fredonia, N. Y., to a new location at 15 Water Street, formerly occupied by the Fredonia Electric Company.

The F. J. Mason Electric Company of Binghamton, N. Y., has moved to a new location at 95 Front Street.

J. V. Wallace Company of Schenectady, N. Y., has moved to new quarters at 33 Barrett Street.

The Pacific States Electric Company announces the opening of an additional distributing center for the southwest at 218 South First Avenue, Phoenix, Arizona.

The Jackson Railway & Light Co., of Jackson, Tenn., announces the opening of its Electrical Store at 110 E. Baltimore Street.

A branch office has been opened in Pittsburgh at 1005 Liberty Ave., by the Franklin Electric Company of Philadelphia.

The Beardslee Chandelier Manufacturing Company of Chicago has just issued a new catalogue (D-8) in which are fully illustrated and described the various types of Denzar units.

V. G. Fullman has resigned as sales manager of the Steel City Electric Company and is now president of the Fullman Manufacturing Company of 1209 Jefferson Street, Latrobe, Pa. The company manufactures automobile accessories, metal stamping, and is soon to place a line of electrical specialties on the market which will be distributed through the jobber.

C. Brandes, Inc., announces the removal of their New York factory to a new plant at 200 Mt. Pleasant Ave., Newark, N. J.

The Circle F Manufacturing Company of Trenton, N. J., has issued a new net price sheet applying to catalogue No. 8.

The Roller-Smith Company, 233 Broadway, New York, announces the appointment of the Detweiler-Bell Company, 101 Milk St., Boston, and 152 Temple St., New Haven, Conn., as its representatives in the New England field.

A new supply house at 68 25th Street, N. E., Miami, Fla., has been opened by the Western Electric Company.

Curtis Lighting, Inc., announces the removal of its St. Louis office from the Title Guaranty Bldg., to 312 Buder Bldg., 7th and Market Streets.

The National Lamp Works of the General Electric Company announce changes in names and addresses in its sales divisions which are as follows: Shelby Lamp Division of Buffalo changes name to Empire Lamp Division, Bryan-Marsh Division of Chicago changes name to Midland Lamp Division and Bryan-Marsh Division of Detroit changes name to Michigan Lamp Division.

The Westinghouse Electric & Manufacturing Co., has opened a new branch office at Tampa, Fla., under the direction of W. L. Southwell.

New Westinghouse Lamp Officers

At a meeting of the Board of Directors of the Westinghouse Lamp Company, recently, the following officers were elected:

E. M. Herr, re-elected President; Walter Cary, formerly a Vice-President was elected First Vice-President; and T. G. Whaling, formerly a General Manager was elected a Vice-President.

Arthur E. Allen, manager of the New York District Sales Office of the Westinghouse Electric & Manufacturing Company was appointed General Manager of the Lamp Company.

Cove Lighting

The Pittsburgh Reflector Company has just issued an especially attractive and instructive pamphlet on Cove Lighting.

It contains pictures of recent installations, among them being Trianon Ball Room, Pittsburgh, the Methodist Church at Mount Lebanon, Pa., and Loew's State Theatre at Los Angeles.

Complete diagrams for domed and level ceilings are also shown together with pictures and descriptions of the various types of reflectors the company manufactures.

New E M F Year Book

The Electrical Trade Publishing Company of 53 West Jackson Boulevard, Chicago, has just issued the 1925 edition of the E. M. F. Electrical Year Book.

It is the reference book of the industry and contains 1400 pages. Every class of electrical product is covered as well as every manufacturer and his products, and the whole is cross indexed.

Westinghouse Lighting Campaign Started

The Westinghouse Lamp Company in cooperation with the Westinghouse Electric and Manufacturing Company's merchandising section has started an extensive mail campaign for the contractor and contractor-dealer in the interests of better lighting.

The dealer's name is printed on the literature which includes, a personal letter to each customer and prospect, together with "The House that Jack Rebuilt," a 24 page illustrated booklet written in story fashion on better lighting.

Also a second letter together with, "The Vogue in Home Lighting," a 48-page booklet on improving the home lighting.

The booklets and letters are written with a view of featuring the dealer's name.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, of "THE ELECTRAGIST," published monthly at Utica, N. Y., for April 1, 1925:

State of New York, }
County of New York, }ss.:

Before me, a Notary Public in and for the State and County aforesaid, personally appeared S. B. Williams, who having been duly sworn according to law, deposes and says that he is the Editor of "THE ELECTRAGIST," and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the name and addresses of the publisher, editor, managing editor, and business manager are:

Publisher, Association of Electragists—International, 15 W. 37th Street, New York, N. Y.
Editor, S. B. Williams, 15 W. 37th Street, New York, N. Y.
Managing Editor, none.
Business Manager, Laurence W. Davis, 15 W. 37th Street, New York, N. Y.

2. That the owner is:

Association of Electragists—International. Not incorporated. Composed of 2,000 members, of which principal officers are:

Joseph A. Fowler, President, 118 Monroe Ave., Memphis, Tenn.
Laurence W. Davis, Secretary-Treasurer, 15 W. 37th Street, New York, N. Y.

3. That the known bondholders, mortgagees, and other security holders owning or holding one per cent. or more of total amount of bonds, mortgages, or other securities are none.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the Company, but also, in cases where the stockholder or security holder appears upon the books of the Company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the sad stock, bonds, or other securities than as so stated by him.

(Signature of) S. B. WILLIAMS,
Editor.

Sworn to and subscribed before me this 19th day of March, 1925.

MAY E. CASLIN.
(My commission expires March 30, 1926).